

## Suspended Direct/Indirect Luminaire 1, 2, 3, or 4 Lamp T5 or T8

### APPLICATION

- Suspended direct-indirect luminaire with architectural detail.
- Bottom openings with baffle in housing for direct/indirect photometric distribution.
- Available in 1, 2, 3, or 4 lamp models.
- Available in 4', 8', and 12' modules for individual or continuous row applications.
- Ideal for educational, office or commercial applications.
- Designed to be mounted with cable hangers (RACH series, see spec. sheet 0913-AR), available for a wide variety of ceiling types and mounting applications.
- Ordering is specified by row configuration. A single catalog number specifies a complete row including hangers.

### CONSTRUCTION/FINISH

- Housing constructed from die formed cold-rolled steel.
- Housing has baked matte white enamel finish.
- Center lamps are situated diagonally for even illumination and hanger clearance.
- Internal aligners require no visible joiner plates for a cleaner appearance.
- Rugged die-cast aluminum end caps are securely attached with threaded stems and nuts.

- Luminaires have 48" (4' luminaires), 96" (8' luminaires) and 144" (12' luminaires) mounting centers.

### ELECTRICAL

- Certified to UL standards.
- T5/T8 lamps and energy saving electronic ballast standard.
- Self-contained emergency battery pack providing 600-700 lumens during emergency mode can be incorporated.
- Row mount units include pre-wired branch wiring with quick-connect plugs.
- Branch wiring available in 1 circuit, 2 circuit, 1 circuit plus emergency, 2 circuit plus emergency, and 1 circuit dimming.

### CATALOG NUMBER

|                              |   |   |                              |   |  |  |  |  |   |  |  |  |  |  |  |
|------------------------------|---|---|------------------------------|---|--|--|--|--|---|--|--|--|--|--|--|
| <b>RO</b>                    | <b>S</b>  | <b>O</b>  |                              |   |  | -  |  | -  |   | -  |  |  |  |  |  |
| <b>FAMILY</b><br>RO - Rubato | <b>LIGHT DISTRIBUTION</b><br>O - Direct/Indirect bottom openings with baffles | <b>NO. OF LAMPS PER CROSS SECTION</b><br>(not included)<br>1<br>2<br>3<br>4 | <b>TYPE</b><br>S - Suspended | <b>WIRING</b><br>1C - 1 Circuit<br>2C - 2 Circuit<br>3C - 3 Circuit<br>1D - 1 Circuit Dimming<br>1E - 1 Circuit + Emergency<br>2E - 2 Circuit + Emergency | <b>LAMP TYPE/WATTAGE</b><br>32 - 32wT8 (48")<br>28 - 28wT5 (46")<br>54HO - 54wT5HO (46") | <b>RUN LENGTH</b><br>4 - 4'<br>8 - 8'<br>12 - 12'<br>Multiples of 4'<br>(16, 20, 24, etc.) | <b>VOLTAGE</b><br>120<br>277<br>347<br>UNV - Universal voltage, 120-277 volt | <b>MAXIMUM SUSPENSION DISTANCE</b><br>24 - 24"<br>48 - 48"<br>96 - 96"<br><br>24" min. | <b>POWER CORD</b><br>CC - Aircraft cable w/coiled cord<br>SC - Aircraft cable w/straight cord | <b>CEILING MOUNT</b><br>M1 - Support connection at ceiling*<br>M2 - Support connection above ceiling*<br>M3 - Support connection to structure*<br>M5 - Support connection to T-bar*<br>M6 - Non-Seismic Support connection to T-bar* | <b>OPTIONS</b><br>1E7 - One emergency ballast (635 lumens)<br>2E7 - Two emergency ballasts (635 lumens)<br>CM - Canadian Market<br>DC - Dust cover(s)<br>GLR - Fusing<br>LPT735 - Lamps installed, 70+ CRI 3500K |  |  |  |  |

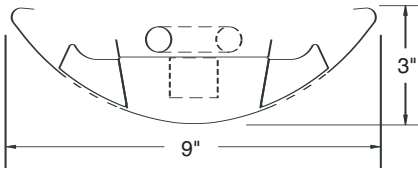
**NOTES:**

\*See spec sheet 0913-AR for more information.

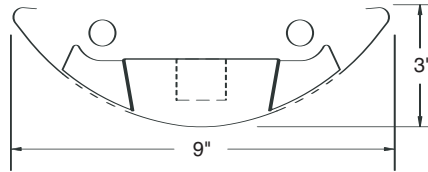
### JOB INFORMATION

**0907.1-AR**

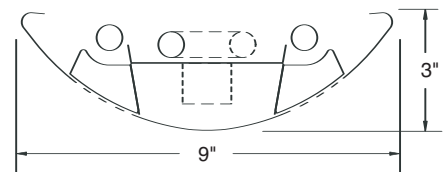
## DIMENSIONS



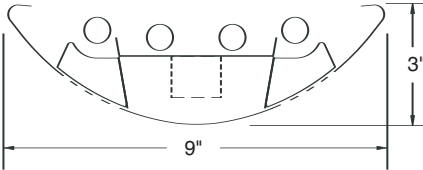
**1 LAMP**



**2 LAMP**

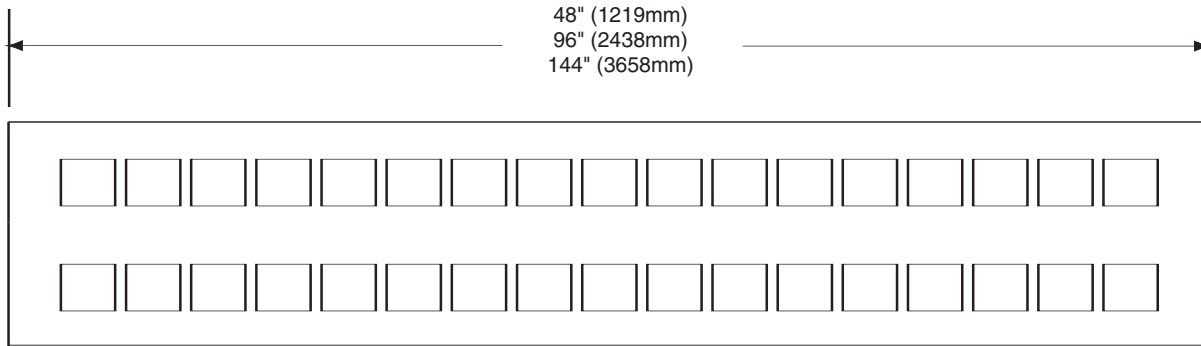
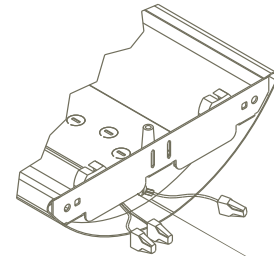


**3 LAMP**



**4 LAMP**

Row mounted units are factory pre-wired with quick-connect plugs for quick and simple row installations.



## PHOTOMETRIC DATA

CATALOG # ROSBMW1C232-4  
TEST #26603 S/MH=0.9

LAMPS = F32 T8  
BALLAST = ELECTRONIC BALLAST FACTOR = .88

LER = 61

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = **\$3.33** BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY= 83.4%

| CANDLEPOWER |      |     |       |
|-------------|------|-----|-------|
| Angle       | End  | 45  | Cross |
| 0           | 651  | 651 | 651   |
| 5           | 656  | 642 | 625   |
| 15          | 611  | 561 | 533   |
| 25          | 529  | 449 | 395   |
| 35          | 424  | 318 | 278   |
| 45          | 311  | 224 | 210   |
| 55          | 193  | 152 | 129   |
| 65          | 98   | 85  | 78    |
| 75          | 40   | 52  | 68    |
| 85          | 14   | 38  | 45    |
| 95          | 54   | 176 | 189   |
| 105         | 190  | 420 | 513   |
| 115         | 364  | 572 | 673   |
| 125         | 530  | 676 | 780   |
| 135         | 679  | 756 | 845   |
| 145         | 806  | 829 | 879   |
| 155         | 903  | 905 | 915   |
| 165         | 969  | 960 | 962   |
| 175         | 1002 | 988 | 984   |

### MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture\*

- 80-50-20 Reflectances (Ceiling-Wall-Floor)
- LLF = 0.75 2850 Lumens/Lamp very clean
- Room width divided by room height = 5 or more, 2 or 1

| Fixture Size & # of Lamps | Room Width<br>Room Height = | Approx. Area (sq. ft.) per Fixture |         |         |         |          |
|---------------------------|-----------------------------|------------------------------------|---------|---------|---------|----------|
|                           |                             | 10 ft-c                            | 30 ft-c | 50 ft-c | 70 ft-c | 100 ft-c |
| 4'                        | 5                           | -                                  | 105     | 63      | 45      | 32       |
| 2 Lamp                    | 2                           | -                                  | 72      | 43      | 31      | -        |
| T8                        | 1                           | -                                  | 52      | 31      | -       | -        |

\*Observe Fixture S/MH Requirements for Specific Applications

| AVERAGE LUMINANCE<br>CD/SQ.M<br>WITH 2850 LUMEN LAMPS |      |     |       |
|---|------|-----|-------|
| ANGLE   | END  | 45° | CROSS |
| 45  | 1485 | 888 | 799   |
| 55  | 1108 | 679 | 547   |
| 65  | 734  | 451 | 386   |
| 75  | 450  | 353 | 420   |
| 85  | 336  | 373 | 385   |

| TYPICAL V.C.P.'s<br>Room Mounting Height |            |           |        |
|--|------------|-----------|--------|
| Room Size                                | Lengthwise | Crosswise |        |
|  | 8.5        | 10        | 8.5 10 |
| 30x30                                    | 94         | 95        | 95 96  |
| 40x40                                    | 92         | 93        | 92 94  |
| 60x30                                    | 94         | 95        | 95 96  |
| 60x60                                    | 90         | 91        | 90 91  |
| 100x100                                  | 85         | 87        | 86 88  |

| COEFFICIENT OF UTILIZATION |    |    |    |    |    |    |
|----------------------------|----|----|----|----|----|----|
| pfc<br>pcc<br>pw<br>RCR    | 20 |    | 70 |    | 50 |    |
|                            | 70 | 50 | 30 | 70 | 50 | 30 |
| 0                          | 83 | 83 | 83 | 75 | 75 | 57 |
| 1                          | 77 | 72 | 69 | 68 | 65 | 50 |
| 2                          | 69 | 64 | 58 | 61 | 56 | 44 |
| 3                          | 64 | 56 | 51 | 56 | 51 | 39 |
| 4                          | 58 | 50 | 44 | 52 | 45 | 34 |
| 5                          | 54 | 45 | 38 | 47 | 40 | 30 |
| 6                          | 50 | 40 | 34 | 44 | 35 | 28 |
| 7                          | 46 | 35 | 29 | 40 | 33 | 27 |
| 8                          | 42 | 33 | 27 | 38 | 29 | 23 |
| 9                          | 40 | 29 | 23 | 34 | 27 | 22 |
| 10                         | 36 | 27 | 22 | 33 | 25 | 20 |

| LIGHT DISTRIBUTION |        |        |           |
|--------------------|--------|--------|-----------|
| DEGREES            | LUMENS | % LAMP | % FIXTURE |
| 0-30               | 427    | 7.5    | 9.0       |
| 0-40               | 637    | 11.2   | 13.4      |
| 0-60               | 962    | 16.9   | 20.2      |
| 0-90               | 1156   | 20.3   | 24.3      |
| 90-180             | 3599   | 63.1   | 75.7      |
| 0-180              | 4755   | 83.4   | 100.0     |

LLF = .75 LLF = LIGHT LOSS FACTOR LLF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90  
LLD = 0.91 @ 40% RATED LAMP LIFE BF = .88 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)

**PHOTOMETRIC DATA**

**CATALOG #** ROSO1C254HO-4  
**TEST #**25034 **S/MH=** 0.8

**LAMPS =** F54HO **INPUT WATTS =** 121  
**BALLAST =** ELECTRONIC **BALLAST FACTOR =** 1.00

**LER = 63**

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = **\$3.81** BASED ON 3000 HRS. AND \$.08 PER KWH.

**FIXTURE EFFICIENCY= 86.2%**

| CANDLEPOWER |      |      |       |  |
|-------------|------|------|-------|--|
| Angle       | End  | 45   | Cross |  |
| 0           | 954  | 954  | 954   |  |
| 5           | 952  | 957  | 944   |  |
| 15          | 882  | 851  | 765   |  |
| 25          | 760  | 600  | 559   |  |
| 35          | 599  | 458  | 437   |  |
| 45          | 436  | 342  | 257   |  |
| 55          | 271  | 180  | 119   |  |
| 65          | 138  | 90   | 110   |  |
| 75          | 60   | 75   | 89    |  |
| 85          | 15   | 47   | 56    |  |
| 95          | 92   | 311  | 373   |  |
| 105         | 338  | 758  | 875   |  |
| 115         | 605  | 989  | 1192  |  |
| 125         | 855  | 1106 | 1309  |  |
| 135         | 1077 | 1233 | 1365  |  |
| 145         | 1264 | 1344 | 1423  |  |
| 155         | 1406 | 1443 | 1475  |  |
| 165         | 1498 | 1512 | 1520  |  |
| 175         | 1543 | 1536 | 1537  |  |

| MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*   |                             |                                    |         |         |         |          |
|---|-----------------------------|------------------------------------|---------|---------|---------|----------|
| <ul style="list-style-type: none"> <li>80-50-20 Reflectances (Ceiling-Wall-Floor)</li> <li>LLF = 0.89 4400 Lumens/Lamp very clean</li> <li>Room width divided by room height = 5 or more, 2 or 1</li> </ul> |                             |                                    |         |         |         |          |
| Fixture Size & # of Lamps   | Room Width<br>Room Height = | Approx. Area (sq. ft.) per Fixture |         |         |         |          |
|   |                             | 10 ft-c                            | 30 ft-c | 50 ft-c | 70 ft-c | 100 ft-c |
| 4'  | 5                           | -                                  | -       | 118     | 84      | 59       |
| 2 Lamp  | 2                           | -                                  | 135     | 81      | 58      | 40       |
| T5HO  | 1                           | -                                  | 97      | 58      | 42      | -        |

| COEFFICIENT OF UTILIZATION |    |    |    |    |    |    |    |    |
|----------------------------|----|----|----|----|----|----|----|----|
| pfc                        | 20 | 70 |    | 50 |    |    |    |    |
|                            | 80 | 70 | 50 | 30 | 50 | 30 |    |    |
| pcc                        | 80 | 70 | 50 | 30 | 50 | 30 |    |    |
| pw                         | 80 | 70 | 50 | 30 | 50 | 30 |    |    |
| RCR                        | 0  | 85 | 85 | 85 | 76 | 76 | 57 | 57 |
|                            | 1  | 79 | 75 | 71 | 69 | 67 | 64 | 51 |
|                            | 2  | 71 | 66 | 60 | 63 | 58 | 55 | 45 |
|                            | 3  | 66 | 57 | 52 | 57 | 52 | 46 | 40 |
|                            | 4  | 59 | 52 | 45 | 53 | 46 | 40 | 34 |
|                            | 5  | 55 | 46 | 39 | 48 | 40 | 35 | 32 |
|                            | 6  | 51 | 40 | 34 | 45 | 36 | 30 | 28 |
|                            | 7  | 46 | 36 | 30 | 41 | 33 | 28 | 26 |
|                            | 8  | 44 | 34 | 27 | 39 | 29 | 25 | 23 |
|                            | 9  | 40 | 30 | 25 | 35 | 28 | 22 | 22 |
|                            | 10 | 38 | 28 | 22 | 34 | 25 | 20 | 20 |

\*Observe Fixture S/MH Requirements for Specific Applications

| AVERAGE LUMINANCE CD/SQ.M WITH 4400 LUMEN LAMPS |      |      |       |  |
|---|------|------|-------|--|
| ANGLE   | END  | 45°  | CROSS |  |
| 45  | 2366 | 1552 | 1118  |  |
| 55  | 1775 | 926  | 579   |  |
| 65  | 1186 | 554  | 629   |  |
| 75  | 783  | 596  | 641   |  |
| 85  | 435  | 552  | 567   |  |

| TYPICAL V.C.P.'s |                 |     |           |     |    |
|------------------|-----------------|-----|-----------|-----|----|
| Room Size        | Mounting Height |     | Crosswise |     |    |
|                  | Lengthwise      | 8.5 | 10        | 8.5 | 10 |
| 30x30            | 91              | 92  | 93        | 95  | 95 |
| 40x40            | 89              | 90  | 90        | 92  | 92 |
| 60x30            | 92              | 92  | 93        | 94  | 94 |
| 60x60            | 87              | 87  | 87        | 88  | 88 |
| 100x100          | 81              | 83  | 81        | 84  | 84 |

| LIGHT DISTRIBUTION |        |        |           |  |
|--------------------|--------|--------|-----------|--|
| DEGREES            | LUMENS | % LAMP | % FIXTURE |  |
| 0-30               | 619    | 7.0    | 8.2       |  |
| 0-40               | 924    | 10.5   | 12.2      |  |
| 0-60               | 1354   | 15.4   | 17.9      |  |
| 0-90               | 1606   | 18.3   | 21.2      |  |
| 90-180             | 5976   | 67.9   | 78.8      |  |
| 0-180              | 7582   | 86.2   | 100.0     |  |

LLF = .89 LLF = LIGHT LOSS FACTOR LFF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90  
LLD = 0.95 @ 40% RATED LAMP LIFE BF = 1.00 ELECTRONIC BALLAST & T5HO LAMP (RELAMP AT 70% LAMP LIFE)

**PHOTOMETRIC DATA**

**CATALOG #** ROSO1C332-4  
**TEST #**25002 **S/MH=** 0.8

**LAMPS =** F32 T8 **INPUT WATTS =** 90  
**BALLAST =** ELECTRONIC **BALLAST FACTOR =** .88

**LER = 70**

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = **\$3.43** BASED ON 3000 HRS. AND \$.08 PER KWH.

**FIXTURE EFFICIENCY= 84.1%**

| CANDLEPOWER |      |      |       |  |
|-------------|------|------|-------|--|
| Angle       | End  | 45   | Cross |  |
| 0           | 729  | 729  | 729   |  |
| 5           | 734  | 713  | 690   |  |
| 15          | 682  | 618  | 576   |  |
| 25          | 596  | 484  | 437   |  |
| 35          | 473  | 349  | 306   |  |
| 45          | 345  | 244  | 237   |  |
| 55          | 214  | 176  | 178   |  |
| 65          | 102  | 113  | 129   |  |
| 75          | 46   | 68   | 76    |  |
| 85          | 10   | 38   | 44    |  |
| 95          | 89   | 192  | 198   |  |
| 105         | 339  | 625  | 654   |  |
| 115         | 620  | 964  | 1077  |  |
| 125         | 889  | 1182 | 1339  |  |
| 135         | 1127 | 1300 | 1462  |  |
| 145         | 1334 | 1418 | 1517  |  |
| 155         | 1489 | 1521 | 1552  |  |
| 165         | 1598 | 1613 | 1617  |  |
| 175         | 1655 | 1655 | 1645  |  |

| MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*   |                             |                                    |         |         |         |          |
|---|-----------------------------|------------------------------------|---------|---------|---------|----------|
| <ul style="list-style-type: none"> <li>80-50-20 Reflectances (Ceiling-Wall-Floor)</li> <li>LLF = 0.75 2850 Lumens/Lamp very clean</li> <li>Room width divided by room height = 5 or more, 2 or 1</li> </ul> |                             |                                    |         |         |         |          |
| Fixture Size & # of Lamps   | Room Width<br>Room Height = | Approx. Area (sq. ft.) per Fixture |         |         |         |          |
|   |                             | 10 ft-c                            | 30 ft-c | 50 ft-c | 70 ft-c | 100 ft-c |
| 4'  | 5                           | -                                  | -       | 94      | 67      | 47       |
| 3 Lamp  | 2                           | -                                  | 106     | 64      | 46      | 32       |
| T8  | 1                           | -                                  | 76      | 46      | 33      | -        |

| COEFFICIENT OF UTILIZATION |    |    |    |    |    |    |    |    |
|----------------------------|----|----|----|----|----|----|----|----|
| pfc                        | 20 | 70 |    | 50 |    |    |    |    |
|                            | 80 | 70 | 50 | 30 | 50 | 30 |    |    |
| pcc                        | 80 | 70 | 50 | 30 | 50 | 30 |    |    |
| pw                         | 80 | 70 | 50 | 30 | 50 | 30 |    |    |
| RCR                        | 0  | 83 | 83 | 83 | 73 | 73 | 55 | 55 |
|                            | 1  | 76 | 72 | 69 | 67 | 64 | 61 | 47 |
|                            | 2  | 69 | 64 | 58 | 60 | 56 | 52 | 41 |
|                            | 3  | 63 | 56 | 50 | 56 | 50 | 45 | 36 |
|                            | 4  | 57 | 50 | 42 | 51 | 44 | 39 | 33 |
|                            | 5  | 53 | 44 | 38 | 46 | 39 | 34 | 29 |
|                            | 6  | 48 | 39 | 33 | 42 | 34 | 29 | 27 |
|                            | 7  | 45 | 35 | 28 | 40 | 32 | 26 | 23 |
|                            | 8  | 41 | 32 | 26 | 36 | 28 | 23 | 22 |
|                            | 9  | 39 | 28 | 23 | 34 | 26 | 20 | 20 |
|                            | 10 | 35 | 27 | 20 | 32 | 23 | 19 | 17 |

\*Observe Fixture S/MH Requirements for Specific Applications

| AVERAGE LUMINANCE CD/SQ.M WITH 2850 LUMEN LAMPS |      |      |       |  |
|---|------|------|-------|--|
| ANGLE   | END  | 45°  | CROSS |  |
| 45  | 1863 | 1085 | 1007  |  |
| 55  | 1392 | 882  | 840   |  |
| 65  | 868  | 671  | 709   |  |
| 75  | 591  | 515  | 519   |  |
| 85  | 280  | 415  | 413   |  |

| TYPICAL V.C.P.'s |                 |     |           |     |    |
|------------------|-----------------|-----|-----------|-----|----|
| Room Size        | Mounting Height |     | Crosswise |     |    |
|                  | Lengthwise      | 8.5 | 10        | 8.5 | 10 |
| 30x30            | 93              | 94  | 94        | 95  | 95 |
| 40x40            | 92              | 92  | 92        | 93  | 93 |
| 60x30            | 94              | 94  | 94        | 95  | 95 |
| 60x60            | 90              | 90  | 90        | 91  | 91 |
| 100x100          | 86              | 88  | 87        | 87  | 87 |

| LIGHT DISTRIBUTION |        |        |           |  |
|--------------------|--------|--------|-----------|--|
| DEGREES            | LUMENS | % LAMP | % FIXTURE |  |
| 0-30               | 470    | 5.5    | 6.5       |  |
| 0-40               | 701    | 8.2    | 9.8       |  |
| 0-60               | 1072   | 12.5   | 14.9      |  |
| 0-90               | 1297   | 15.2   | 18.0      |  |
| 90-180             | 5895   | 69.0   | 82.0      |  |
| 0-180              | 7192   | 84.1   | 100.0     |  |

LLF = .75 LLF = LIGHT LOSS FACTOR LFF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90  
LLD = 0.91 @ 40% RATED LAMP LIFE BF = .88 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)

**PHOTOMETRIC DATA**

**CATALOG #** ROSO1C354HO-4  
**TEST #**25020 **S/MH=** 0.9

**LAMPS =** F54HO T5 **INPUT WATTS =** 188  
**BALLAST =** ELECTRONIC **BALLAST FACTOR =** 1.00

**LER = 61**

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = **\$3.93** BASED ON 3000 HRS. AND \$.08 PER KWH.

**FIXTURE EFFICIENCY= 86.7%**

| CANDLEPOWER |      |      |       |  |
|-------------|------|------|-------|--|
| Angle       | End  | 45   | Cross |  |
| 0           | 1063 | 1063 | 1063  |  |
| 5           | 1051 | 1067 | 1057  |  |
| 15          | 976  | 985  | 896   |  |
| 25          | 848  | 753  | 715   |  |
| 35          | 681  | 580  | 585   |  |
| 45          | 498  | 467  | 409   |  |
| 55          | 312  | 299  | 244   |  |
| 65          | 156  | 163  | 154   |  |
| 75          | 71   | 95   | 103   |  |
| 85          | 17   | 58   | 68    |  |
| 95          | 128  | 369  | 391   |  |
| 105         | 498  | 1161 | 1222  |  |
| 115         | 906  | 1642 | 1889  |  |
| 125         | 1284 | 1849 | 2174  |  |
| 135         | 1622 | 2024 | 2268  |  |
| 145         | 1909 | 2169 | 2323  |  |
| 155         | 2147 | 2288 | 2372  |  |
| 165         | 2288 | 2344 | 2361  |  |
| 175         | 2365 | 2372 | 2360  |  |

| MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*   |                             |                                    |         |         |         |          |
|---|-----------------------------|------------------------------------|---------|---------|---------|----------|
| <ul style="list-style-type: none"> <li>80-50-20 Reflectances (Ceiling-Wall-Floor)</li> <li>LLF = 0.89 4400 Lumens/Lamp very clean</li> <li>Room width divided by room height = 5 or more, 2 or 1</li> </ul> |                             |                                    |         |         |         |          |
| Fixture Size & # of Lamps   | Room Width<br>Room Height = | Approx. Area (sq. ft.) per Fixture |         |         |         |          |
|   |                             | 10 ft-c                            | 30 ft-c | 50 ft-c | 70 ft-c | 100 ft-c |
| 4'  | 5                           | -                                  | -       | -       | 126     | 88       |
| 3 Lamp  | 2                           | -                                  | -       | 120     | 86      | 60       |
| T5HO  | 1                           | -                                  | 144     | 86      | 62      | 43       |

| COEFFICIENT OF UTILIZATION |    |    |    |    |    |    |    |    |
|----------------------------|----|----|----|----|----|----|----|----|
| pfc                        | 20 | 70 |    | 50 |    |    |    |    |
|                            | 80 | 70 | 50 | 30 | 50 | 30 |    |    |
| pcc                        | 80 | 70 | 50 | 30 | 50 | 30 |    |    |
| pw                         | 80 | 70 | 50 | 30 | 50 | 30 |    |    |
| RCR                        | 0  | 85 | 85 | 85 | 76 | 76 | 56 | 56 |
|                            | 1  | 79 | 75 | 71 | 68 | 66 | 64 | 50 |
|                            | 2  | 71 | 66 | 60 | 63 | 57 | 54 | 44 |
|                            | 3  | 65 | 57 | 52 | 56 | 51 | 46 | 39 |
|                            | 4  | 59 | 51 | 45 | 53 | 45 | 40 | 34 |
|                            | 5  | 55 | 45 | 39 | 47 | 40 | 34 | 30 |
|                            | 6  | 50 | 40 | 34 | 44 | 35 | 30 | 28 |
|                            | 7  | 46 | 36 | 29 | 40 | 33 | 27 | 25 |
|                            | 8  | 42 | 33 | 27 | 38 | 29 | 23 | 23 |
|                            | 9  | 40 | 29 | 23 | 34 | 27 | 22 | 20 |
|                            | 10 | 36 | 28 | 22 | 33 | 25 | 20 | 19 |

\*Observe Fixture S/MH Requirements for Specific Applications

| AVERAGE LUMINANCE CD/SQ.M WITH 4400 LUMEN LAMPS |      |      |       |  |
|---|------|------|-------|--|
| ANGLE   | END  | 45°  | CROSS |  |
| 45  | 2729 | 2210 | 1868  |  |
| 55  | 2072 | 1625 | 1265  |  |
| 65  | 1368 | 1079 | 958   |  |
| 75  | 958  | 837  | 831   |  |
| 85  | 533  | 800  | 816   |  |

| TYPICAL V.C.P.'s |  |  |  |  |
|------------------|--|--|--|--|
|------------------|--|--|--|--|

## PHOTOMETRIC DATA

CATALOG # ROSBMW1C432-4  
TEST #26611 S/MH= 0.8

LAMPS = F32 T8  
BALLAST = ELECTRONIC BALLAST FACTOR = .88

LER = 73

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$3.29 BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY= 83.7%

| CANDLEPOWER |      |      |       |
|-------------|------|------|-------|
| Angle       | End  | 45   | Cross |
| 0           | 829  | 829  | 829   |
| 5           | 823  | 804  | 781   |
| 15          | 764  | 668  | 630   |
| 25          | 660  | 536  | 507   |
| 35          | 529  | 425  | 474   |
| 45          | 387  | 375  | 439   |
| 55          | 240  | 306  | 340   |
| 65          | 131  | 209  | 236   |
| 75          | 62   | 108  | 100   |
| 85          | 22   | 54   | 60    |
| 95          | 120  | 199  | 192   |
| 105         | 442  | 665  | 677   |
| 115         | 846  | 1191 | 1221  |
| 125         | 1221 | 1575 | 1701  |
| 135         | 1556 | 1838 | 1990  |
| 145         | 1842 | 1995 | 2146  |
| 155         | 2065 | 2127 | 2193  |
| 165         | 2211 | 2236 | 2247  |
| 175         | 2290 | 2291 | 2291  |

### MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture\*

- 80-50-20 Reflectances (Ceiling-Wall-Floor)
- LLF = 0.75 2850 Lumens/Lamp very clean
- Room width divided by room height = 5 or more, 2 or 1

| Fixture Size & # of Lamps | Room Width<br>Room Height = | Approx. Area (sq. ft.) per Fixture |         |         |         |          |
|---------------------------|-----------------------------|------------------------------------|---------|---------|---------|----------|
|                           |                             | 10 ft-c                            | 30 ft-c | 50 ft-c | 70 ft-c | 100 ft-c |
| 4'                        | 5                           | -                                  | -       | 124     | 89      | 62       |
| 4 Lamp                    | 2                           | -                                  | 140     | 84      | 60      | 42       |
| T8                        | 1                           | -                                  | 100     | 60      | 43      | -        |

\*Observe Fixture S/MH Requirements for Specific Applications

### AVERAGE LUMINANCE CD/SQ.M WITH 2850 LUMEN LAMPS

| ANGLE | END  | 45°  | CROSS |
|-------|------|------|-------|
| 45    | 1848 | 1487 | 1671  |
| 55    | 1378 | 1368 | 1441  |
| 65    | 981  | 1109 | 1168  |
| 75    | 697  | 732  | 618   |
| 85    | 528  | 529  | 514   |

### TYPICAL V.C.P.'s

| Room Size | Mounting Height |           |
|-----------|-----------------|-----------|
|           | Lengthwise      | Crosswise |
| 30x30     | 100             | 99        |
| 40x40     | 99              | 98        |
| 60x30     | 99              | 99        |
| 60x60     | 99              | 97        |
| 100x100   | 96              | 94        |

LLF = .75 LLF = LIGHT LOSS FACTOR LLF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90  
LLD = 0.91 @ 40% RATED LAMP LIFE BF = .88 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)

### COEFFICIENT OF UTILIZATION

| pfc<br>pcc<br>pw<br>RCR | 20 |    |    | 70 |    |    | 50 |    |  |
|-------------------------|----|----|----|----|----|----|----|----|--|
|                         | 70 | 50 | 30 | 70 | 50 | 30 | 50 | 30 |  |
| 0                       | 82 | 82 | 82 | 72 | 72 | 72 | 55 | 55 |  |
| 1                       | 76 | 71 | 68 | 67 | 64 | 60 | 47 | 46 |  |
| 2                       | 68 | 63 | 57 | 60 | 56 | 52 | 41 | 39 |  |
| 3                       | 63 | 55 | 50 | 55 | 48 | 44 | 36 | 34 |  |
| 4                       | 56 | 48 | 42 | 50 | 42 | 38 | 33 | 28 |  |
| 5                       | 53 | 42 | 36 | 46 | 39 | 33 | 28 | 25 |  |
| 6                       | 47 | 39 | 32 | 41 | 34 | 28 | 26 | 22 |  |
| 7                       | 45 | 34 | 28 | 39 | 30 | 26 | 23 | 20 |  |
| 8                       | 40 | 32 | 25 | 35 | 28 | 23 | 20 | 17 |  |
| 9                       | 38 | 28 | 23 | 34 | 25 | 20 | 16 | 16 |  |
| 10                      | 35 | 26 | 20 | 30 | 23 | 17 | 14 | 14 |  |

### LIGHT DISTRIBUTION

| DEGREES | LUMENS | % LAMP | % FIXTURE |
|---------|--------|--------|-----------|
| 0-30    | 522    | 4.6    | 5.5       |
| 0-40    | 808    | 7.1    | 8.5       |
| 0-60    | 1369   | 12.0   | 14.3      |
| 0-90    | 1723   | 15.1   | 18.1      |
| 90-180  | 7820   | 68.6   | 81.9      |
| 0-180   | 9543   | 83.7   | 100.0     |

## PHOTOMETRIC DATA

CATALOG # ROSO1C454H0-4  
TEST #25023 S/MH= 0.8

LAMPS = F54 T5HO  
BALLAST = ELECTRONIC BALLAST FACTOR = 1.00

LER = 63

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$3.81 BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY= 86.1%

| CANDLEPOWER |      |      |       |
|-------------|------|------|-------|
| Angle       | End  | 45   | Cross |
| 0           | 1081 | 1081 | 1081  |
| 5           | 1075 | 1086 | 1054  |
| 15          | 997  | 954  | 843   |
| 25          | 872  | 690  | 631   |
| 35          | 688  | 522  | 501   |
| 45          | 503  | 404  | 309   |
| 55          | 322  | 233  | 204   |
| 65          | 168  | 145  | 209   |
| 75          | 76   | 109  | 107   |
| 85          | 19   | 59   | 69    |
| 95          | 162  | 458  | 506   |
| 105         | 713  | 1437 | 1475  |
| 115         | 1320 | 2228 | 2491  |
| 125         | 1896 | 2639 | 3054  |
| 135         | 2416 | 2925 | 3257  |
| 145         | 2847 | 3146 | 3370  |
| 155         | 3175 | 3330 | 3433  |
| 165         | 3394 | 3450 | 3485  |
| 175         | 3501 | 3496 | 3495  |

### MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture\*

- 80-50-20 Reflectances (Ceiling-Wall-Floor)
- LLF = 0.89 4400 Lumens/Lamp very clean
- Room width divided by room height = 5 or more, 2 or 1

| Fixture Size & # of Lamps | Room Width<br>Room Height = | Approx. Area (sq. ft.) per Fixture |         |         |         |          |
|---------------------------|-----------------------------|------------------------------------|---------|---------|---------|----------|
|                           |                             | 10 ft-c                            | 30 ft-c | 50 ft-c | 70 ft-c | 100 ft-c |
| 4'                        | 5                           | -                                  | -       | -       | -       | 115      |
| 4 Lamp                    | 2                           | -                                  | -       | -       | 112     | 78       |
| T5HO                      | 1                           | -                                  | -       | 112     | 80      | 56       |

\*Observe Fixture S/MH Requirements for Specific Applications

### AVERAGE LUMINANCE CD/SQ.M WITH 4400 LUMEN LAMPS

| ANGLE | END  | 45°  | CROSS |
|-------|------|------|-------|
| 45    | 2871 | 2306 | 1764  |
| 55    | 2266 | 1640 | 1436  |
| 65    | 1605 | 1385 | 1996  |
| 75    | 1185 | 1700 | 1669  |
| 85    | 880  | 2732 | 3196  |

### TYPICAL V.C.P.'s

| Room Size | Mounting Height |           |
|-----------|-----------------|-----------|
|           | Lengthwise      | Crosswise |
| 30x30     | 100             | 99        |
| 40x40     | 99              | 98        |
| 60x30     | 99              | 99        |
| 60x60     | 99              | 97        |
| 100x100   | 96              | 94        |

LLF = .89 LLF = LIGHT LOSS FACTOR LLF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90  
LLD = 0.95 @ 40% RATED LAMP LIFE BF = 1.00 ELECTRONIC BALLAST & T5HO LAMP (RELAMP AT 70% LAMP LIFE)

### COEFFICIENT OF UTILIZATION

| pfc<br>pcc<br>pw<br>RCR | 20 |    |    | 70 |    |    | 50 |    |  |
|-------------------------|----|----|----|----|----|----|----|----|--|
|                         | 70 | 50 | 30 | 70 | 50 | 30 | 50 | 30 |  |
| 0                       | 84 | 84 | 84 | 73 | 73 | 73 | 54 | 54 |  |
| 1                       | 77 | 73 | 69 | 67 | 64 | 61 | 46 | 46 |  |
| 2                       | 69 | 64 | 58 | 60 | 56 | 52 | 40 | 39 |  |
| 3                       | 64 | 56 | 51 | 56 | 50 | 45 | 35 | 33 |  |
| 4                       | 58 | 50 | 44 | 51 | 44 | 39 | 32 | 28 |  |
| 5                       | 54 | 44 | 38 | 46 | 39 | 34 | 28 | 25 |  |
| 6                       | 48 | 40 | 33 | 42 | 34 | 28 | 26 | 22 |  |
| 7                       | 45 | 35 | 28 | 40 | 30 | 26 | 23 | 20 |  |
| 8                       | 41 | 32 | 26 | 36 | 28 | 23 | 20 | 17 |  |
| 9                       | 39 | 28 | 23 | 34 | 26 | 20 | 19 | 16 |  |
| 10                      | 35 | 27 | 20 | 32 | 23 | 19 | 17 | 14 |  |

### LIGHT DISTRIBUTION

| DEGREES | LUMENS | % LAMP | % FIXTURE |
|---------|--------|--------|-----------|
| 0-30    | 703    | 4.0    | 4.6       |
| 0-40    | 1057   | 6.0    | 7.0       |
| 0-60    | 1586   | 9.0    | 10.5      |
| 0-90    | 1940   | 11.0   | 12.8      |
| 90-180  | 13211  | 75.1   | 87.2      |
| 0-180   | 15150  | 86.1   | 100.0     |