

IES INDOOR REPORT

PHOTOMETRIC FILENAME : RNDX-3-L67-835-FXA-(L37)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]GEN FROM BALLABS TEST NO. 18644.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUE DATE] 07-19-2023
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
[LUMINAIRE] 3' RND SURFACE LUMINAIRE
[MORE] WITH FROSTED ACRYLIC CONVEX LENS
[LUMCAT] RNDx-3-L67-835-FXA-(L37)-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR,ARCHITECTURAL,EDUCATION
[_SEARCH_MOUNTING] SURFACE

CHARACTERISTICS

| | |
|---------------------------------|--------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 3569 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 109 |
| Total Luminaire Watts | 32.89 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.28 |
| Spacing Criterion (90-270) | 1.28 |
| Spacing Criterion (Diagonal) | 1.38 |
| Basic Luminous Shape | Circular w/ Sides |
| Luminous Length (0-180) | 2.81 ft (Diameter) |
| Luminous Width (90-270) | 2.81 ft (Diameter) |
| Luminous Height | 0.15 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 1873 | 1891 | 1891 |
| 55 | 1765 | 1760 | 1763 |
| 65 | 1565 | 1584 | 1567 |
| 75 | 1251 | 1297 | 1233 |
| 85 | 861 | 879 | 819 |

IES INDOOR REPORT
 PHOTOMETRIC FILENAME : RNDX-3-L67-835-FXA-(L37)-DIM-UNV_.IES

CANDELA TABULATION

| | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|-----|------------|-------------|-------------|-------------|-------------|
| 0 | 1233.629 | 1233.629 | 1233.629 | 1233.629 | 1233.629 |
| 5 | 1229.340 | 1228.804 | 1228.268 | 1227.196 | 1228.804 |
| 10 | 1214.865 | 1215.401 | 1216.473 | 1213.256 | 1216.473 |
| 15 | 1188.594 | 1192.347 | 1192.347 | 1189.131 | 1192.347 |
| 20 | 1152.138 | 1157.499 | 1156.963 | 1156.963 | 1154.282 |
| 25 | 1106.031 | 1107.639 | 1108.711 | 1106.567 | 1107.103 |
| 30 | 1048.665 | 1051.346 | 1049.737 | 1045.448 | 1052.418 |
| 35 | 981.113 | 986.474 | 978.969 | 980.041 | 987.011 |
| 40 | 901.766 | 908.736 | 905.519 | 908.736 | 910.344 |
| 45 | 815.986 | 820.275 | 824.028 | 830.461 | 824.028 |
| 50 | 730.742 | 725.916 | 733.422 | 740.928 | 733.422 |
| 55 | 640.136 | 631.558 | 638.528 | 642.817 | 639.600 |
| 60 | 543.633 | 533.983 | 543.097 | 545.778 | 545.242 |
| 65 | 436.408 | 435.335 | 441.769 | 440.697 | 436.944 |
| 70 | 332.399 | 336.688 | 341.513 | 336.688 | 330.254 |
| 75 | 233.215 | 233.215 | 241.793 | 233.215 | 229.999 |
| 80 | 143.146 | 143.682 | 147.435 | 139.393 | 142.610 |
| 85 | 76.130 | 80.419 | 77.738 | 73.449 | 72.377 |
| 90 | 28.951 | 32.168 | 30.559 | 28.415 | 28.415 |
| 95 | 4.825 | 4.825 | 5.897 | 5.897 | 2.681 |
| 100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 105 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 110 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 115 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 120 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 125 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 130 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 135 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 140 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 145 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 150 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 155 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 160 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 165 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 170 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 175 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 180 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : RNDX-3-L67-835-FXA-(L37)-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 453.03 | N.A. | 12.70 |
| 0-30 | 963.36 | N.A. | 27.00 |
| 0-40 | 1577.8 | N.A. | 44.20 |
| 0-60 | 2783.79 | N.A. | 78.00 |
| 0-80 | 3469.03 | N.A. | 97.20 |
| 0-90 | 3557.9 | N.A. | 99.70 |
| 10-90 | 3441.05 | N.A. | 96.40 |
| 20-40 | 1124.78 | N.A. | 31.50 |
| 20-50 | 1759.85 | N.A. | 49.30 |
| 40-70 | 1640.62 | N.A. | 46.00 |
| 60-80 | 685.23 | N.A. | 19.20 |
| 70-80 | 250.61 | N.A. | 7.00 |
| 80-90 | 88.87 | N.A. | 2.50 |
| 90-110 | 10.98 | N.A. | 0.30 |
| 90-120 | 10.98 | N.A. | 0.30 |
| 90-130 | 10.98 | N.A. | 0.30 |
| 90-150 | 10.98 | N.A. | 0.30 |
| 90-180 | 10.98 | N.A. | 0.30 |
| 110-180 | 0.00 | N.A. | 0.00 |
| 0-180 | 3568.88 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 116.84 |
| 10-20 | 336.18 |
| 20-30 | 510.33 |
| 30-40 | 614.45 |
| 40-50 | 635.07 |
| 50-60 | 570.92 |
| 60-70 | 434.63 |
| 70-80 | 250.61 |
| 80-90 | 88.87 |
| 90-100 | 10.98 |
| 100-110 | 0.00 |
| 110-120 | 0.00 |
| 120-130 | 0.00 |
| 130-140 | 0.00 |
| 140-150 | 0.00 |
| 150-160 | 0.00 |
| 160-170 | 0.00 |
| 170-180 | 0.00 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : RNDX-3-L67-835-FXA-(L37)-DIM-UNV_.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

| RC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 64 | 74 | 68 | 62 | 72 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 69 | 60 | 54 | 66 | 59 | 53 | 64 | 57 | 52 | 61 | 56 | 52 | 49 |
| 5 | 75 | 62 | 53 | 47 | 73 | 61 | 53 | 46 | 59 | 52 | 46 | 57 | 51 | 45 | 55 | 49 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 35 | 47 | 40 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 59 | 46 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 |

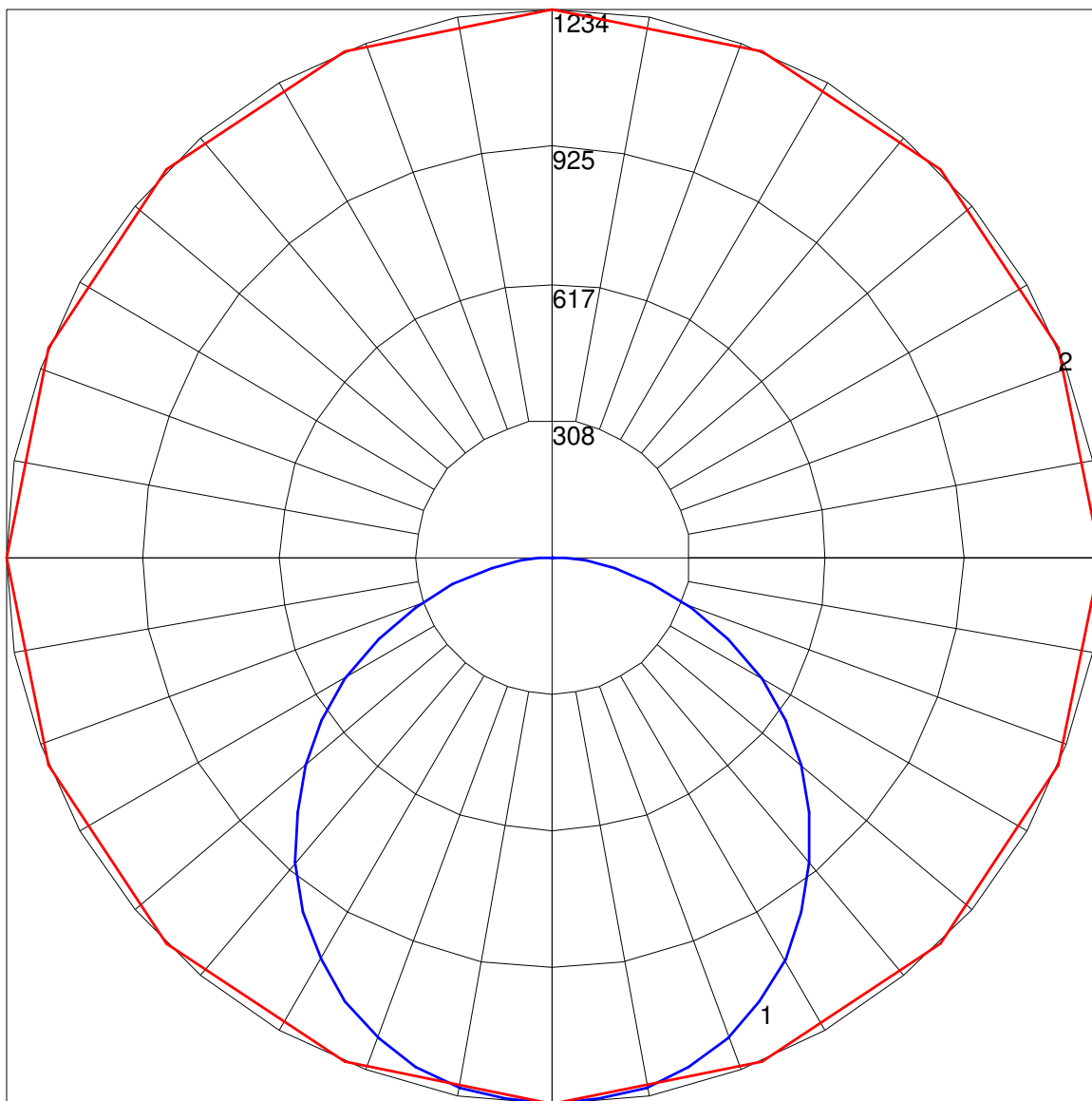
IES INDOOR REPORT
PHOTOMETRIC FILENAME : RNDX-3-L67-835-FXA-(L37)-DIM-UNV_.IES

UGR TABLE - CORRECTED

| | | | | | | | | | | | |
|----------------|------|----------------------|------|------|------|------|--------------------|------|------|------|------|
| Reflectances | | | | | | | | | | | |
| Ceiling Cavity | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 | |
| Walls | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 | |
| Floor Cavity | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | |
| Room Size | | UGR Viewed Crosswise | | | | | UGR Viewed Endwise | | | | |
| X=2H | Y=2H | 13.1 | 14.8 | 13.5 | 15.1 | 15.4 | 13.2 | 14.9 | 13.6 | 15.2 | 15.5 |
| | 3H | 14.9 | 16.4 | 15.3 | 16.7 | 17.1 | 14.9 | 16.4 | 15.3 | 16.8 | 17.1 |
| | 4H | 15.5 | 16.9 | 15.9 | 17.3 | 17.6 | 15.5 | 17.0 | 15.9 | 17.3 | 17.7 |
| | 6H | 16.0 | 17.3 | 16.4 | 17.6 | 18.0 | 16.0 | 17.3 | 16.4 | 17.7 | 18.0 |
| | 8H | 16.1 | 17.4 | 16.5 | 17.7 | 18.1 | 16.1 | 17.4 | 16.6 | 17.8 | 18.2 |
| | 12H | 16.2 | 17.4 | 16.6 | 17.8 | 18.2 | 16.2 | 17.4 | 16.7 | 17.8 | 18.2 |
| 4H | 2H | 13.7 | 15.2 | 14.1 | 15.5 | 15.9 | 13.8 | 15.2 | 14.2 | 15.6 | 16.0 |
| | 3H | 15.7 | 16.9 | 16.1 | 17.3 | 17.7 | 15.8 | 16.9 | 16.2 | 17.3 | 17.7 |
| | 4H | 16.5 | 17.5 | 16.9 | 17.9 | 18.4 | 16.5 | 17.6 | 16.9 | 18.0 | 18.4 |
| | 6H | 17.0 | 18.0 | 17.5 | 18.4 | 18.9 | 17.0 | 18.0 | 17.5 | 18.4 | 18.9 |
| | 8H | 17.2 | 18.1 | 17.7 | 18.5 | 19.0 | 17.2 | 18.1 | 17.7 | 18.5 | 19.0 |
| | 12H | 17.4 | 18.2 | 17.9 | 18.7 | 19.1 | 17.4 | 18.2 | 17.9 | 18.6 | 19.1 |
| 8H | 4H | 16.7 | 17.6 | 17.2 | 18.1 | 18.5 | 16.8 | 17.7 | 17.2 | 18.1 | 18.6 |
| | 6H | 17.4 | 18.2 | 17.9 | 18.6 | 19.1 | 17.4 | 18.2 | 17.9 | 18.7 | 19.1 |
| | 8H | 17.7 | 18.4 | 18.2 | 18.9 | 19.4 | 17.7 | 18.4 | 18.2 | 18.9 | 19.3 |
| | 12H | 18.0 | 18.5 | 18.5 | 19.0 | 19.6 | 17.9 | 18.5 | 18.4 | 19.0 | 19.6 |
| 12H | 4H | 16.8 | 17.6 | 17.3 | 18.0 | 18.5 | 16.8 | 17.6 | 17.3 | 18.1 | 18.5 |
| | 6H | 17.5 | 18.2 | 18.0 | 18.6 | 19.2 | 17.5 | 18.2 | 18.0 | 18.6 | 19.2 |
| | 8H | 17.8 | 18.4 | 18.3 | 18.9 | 19.5 | 17.8 | 18.4 | 18.3 | 18.9 | 19.4 |

Maximum UGR = 19.6

POLAR GRAPH



Maximum Candela = 1233.629 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)