

IES INDOOR REPORT

PHOTOMETRIC FILENAME : FFR G2 24 SH UV FA 940.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] LLIA001588-007A (s)

[TESTLAB] LightLab International Allentown, LLC

[ISSUE DATE] 2/17/2022

[MANUFAC] Lumen Focus, LLC

[LUMCAT] FFR G2 24 SH UV FA 940

[LUMINAIRE] Retrofit kit installed in an A.L.P. EL-2x4-23-2 2x4 housing,

[MORE] formed white painted steel reflectors, frosted linear ribbed plastic enclosure.

[LAMP] 128 white LEDs, two LS3873A8_4000_90R 4000K 64 LED boards

[BALLAST] One ULT D21CC80UNVPW-C LED driver programmed at 1220mA

[OTHER] 120.0Vac, 60.00Hz, 0.5234A, 62.63W, 0.997PF, 5.9%THD(i)

[OTHER] This test was performed using the absolute method of photometry.

[MORE] Lamp lumens value was set to -1

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 8923 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 142 |
| Total Luminaire Watts | 62.631 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.20 |
| Spacing Criterion (90-270) | 1.28 |
| Spacing Criterion (Diagonal) | 1.36 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 3.75 ft |
| Luminous Width (90-270) | 1.75 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 4236 | 4612 | 4978 |
| 55 | 3891 | 4500 | 5103 |
| 65 | 3486 | 4467 | 5413 |
| 75 | 2925 | 4584 | 6053 |
| 85 | 1974 | 4024 | 4174 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 1124.42 | N.A. | 12.60 |
| 0-30 | 2373.17 | N.A. | 26.60 |
| 0-40 | 3861.56 | N.A. | 43.30 |
| 0-60 | 6807.19 | N.A. | 76.30 |
| 0-80 | 8702.25 | N.A. | 97.50 |
| 0-90 | 8922.94 | N.A. | 100.00 |
| 10-90 | 8630.8 | N.A. | 96.70 |
| 20-40 | 2737.14 | N.A. | 30.70 |
| 20-50 | 4273.26 | N.A. | 47.90 |
| 40-70 | 4085.1 | N.A. | 45.80 |
| 60-80 | 1895.07 | N.A. | 21.20 |
| 70-80 | 755.60 | N.A. | 8.50 |
| 80-90 | 220.69 | N.A. | 2.50 |
| 90-110 | 0.00 | N.A. | 0.00 |
| 90-120 | 0.00 | N.A. | 0.00 |
| 90-130 | 0.00 | N.A. | 0.00 |
| 90-150 | 0.00 | N.A. | 0.00 |
| 90-180 | 0.00 | N.A. | 0.00 |
| 110-180 | 0.00 | N.A. | 0.00 |
| 0-180 | 8922.94 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 292.14 |
| 10-20 | 832.28 |
| 20-30 | 1248.75 |
| 30-40 | 1488.39 |
| 40-50 | 1536.12 |
| 50-60 | 1409.51 |
| 60-70 | 1139.47 |
| 70-80 | 755.60 |
| 80-90 | 220.69 |
| 90-100 | 0.00 |
| 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 |

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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 | 105 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 87 | 89 | 87 | 85 | 83 |
| 2 | 98 | 89 | 82 | 76 | 95 | 88 | 81 | 75 | 84 | 78 | 74 | 81 | 76 | 72 | 78 | 74 | 70 | 68 |
| 3 | 89 | 78 | 70 | 63 | 87 | 77 | 69 | 63 | 74 | 67 | 61 | 71 | 65 | 60 | 68 | 63 | 59 | 57 |
| 4 | 82 | 69 | 60 | 53 | 79 | 68 | 59 | 53 | 65 | 58 | 52 | 63 | 57 | 51 | 61 | 55 | 51 | 48 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 58 | 51 | 45 | 56 | 50 | 45 | 55 | 49 | 44 | 42 |
| 6 | 69 | 56 | 46 | 40 | 67 | 55 | 46 | 40 | 53 | 45 | 39 | 51 | 44 | 39 | 49 | 43 | 39 | 37 |
| 7 | 64 | 50 | 41 | 35 | 62 | 50 | 41 | 35 | 48 | 40 | 35 | 47 | 40 | 35 | 45 | 39 | 34 | 32 |
| 8 | 60 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 43 | 36 | 31 | 41 | 35 | 31 | 29 |
| 9 | 56 | 42 | 34 | 28 | 54 | 42 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 38 | 31 | 26 | 37 | 30 | 25 | 36 | 30 | 25 | 36 | 30 | 25 | 23 |

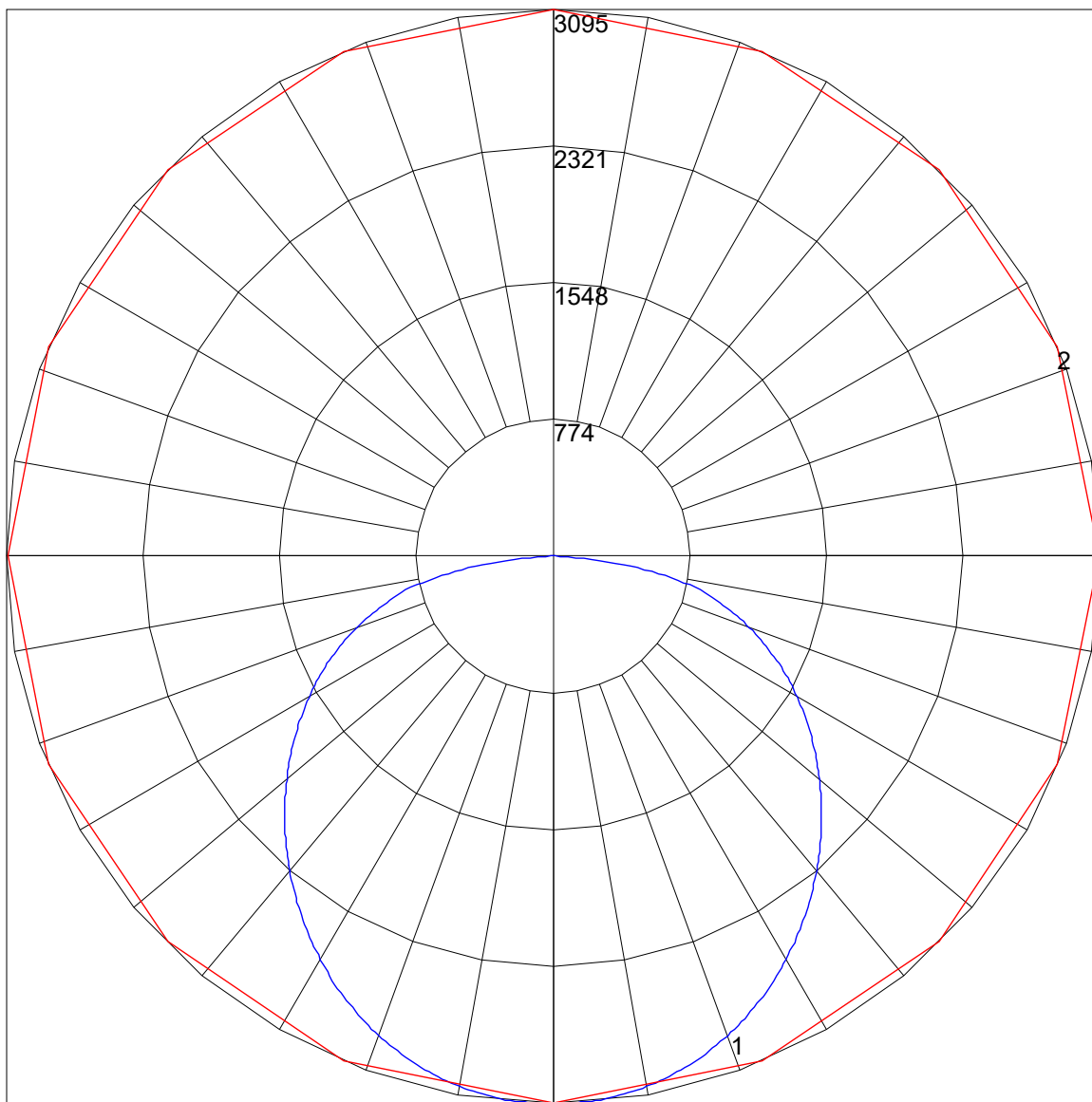
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UGR TABLE - CORRECTED

| 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 | 16.5 | 18.1 | 16.8 | 18.5 | 18.8 | 18.1 | 19.8 | 18.5 | 20.1 | 20.4 |
| | 3H | 18.2 | 19.7 | 18.6 | 20.0 | 20.4 | 20.5 | 22.0 | 20.9 | 22.3 | 22.7 |
| | 4H | 18.8 | 20.3 | 19.2 | 20.6 | 21.0 | 21.5 | 23.0 | 21.9 | 23.3 | 23.7 |
| | 6H | 19.3 | 20.6 | 19.7 | 21.0 | 21.4 | 22.5 | 23.8 | 22.9 | 24.2 | 24.5 |
| | 8H | 19.4 | 20.7 | 19.8 | 21.1 | 21.5 | 22.8 | 24.0 | 23.2 | 24.4 | 24.8 |
| | 12H | 19.5 | 20.7 | 19.9 | 21.1 | 21.5 | 22.9 | 24.1 | 23.3 | 24.5 | 24.9 |
| 4H | 2H | 17.4 | 18.8 | 17.8 | 19.2 | 19.5 | 18.7 | 20.1 | 19.1 | 20.4 | 20.8 |
| | 3H | 19.4 | 20.6 | 19.8 | 21.0 | 21.4 | 21.3 | 22.5 | 21.7 | 22.9 | 23.3 |
| | 4H | 20.1 | 21.2 | 20.6 | 21.6 | 22.1 | 22.5 | 23.6 | 23.0 | 24.0 | 24.5 |
| | 6H | 20.7 | 21.7 | 21.2 | 22.1 | 22.6 | 23.6 | 24.6 | 24.1 | 25.0 | 25.5 |
| | 8H | 20.9 | 21.8 | 21.4 | 22.2 | 22.7 | 24.0 | 24.9 | 24.5 | 25.3 | 25.8 |
| | 12H | 21.0 | 21.8 | 21.5 | 22.3 | 22.8 | 24.2 | 25.0 | 24.7 | 25.5 | 26.0 |
| 8H | 4H | 20.8 | 21.7 | 21.3 | 22.1 | 22.6 | 22.8 | 23.7 | 23.3 | 24.2 | 24.6 |
| | 6H | 21.6 | 22.3 | 22.0 | 22.8 | 23.3 | 24.1 | 24.9 | 24.6 | 25.4 | 25.8 |
| | 8H | 21.8 | 22.5 | 22.3 | 23.0 | 23.5 | 24.6 | 25.2 | 25.1 | 25.8 | 26.2 |
| | 12H | 22.0 | 22.6 | 22.5 | 23.1 | 23.7 | 24.9 | 25.5 | 25.4 | 26.0 | 26.5 |
| 12H | 4H | 20.9 | 21.7 | 21.4 | 22.2 | 22.7 | 22.9 | 23.7 | 23.3 | 24.2 | 24.6 |
| | 6H | 21.8 | 22.5 | 22.3 | 22.9 | 23.4 | 24.2 | 24.9 | 24.7 | 25.3 | 25.9 |
| | 8H | 22.1 | 22.7 | 22.6 | 23.2 | 23.8 | 24.7 | 25.3 | 25.2 | 25.8 | 26.3 |

Maximum UGR = 26.5

POLAR GRAPH



Maximum Candela = 3095 Located At Horizontal Angle = 90, Vertical Angle = 1.5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (1.5) (Through Max. Cd.)