



IES INDOOR REPORT

PHOTOMETRIC FILENAME : CLRT14-FS1-UNV-20W-4000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] LED-14649

[TESTLAB] LSI INDUSTRIES, INC.

[TESTDATE] 03/08/24

[ISSUEDATE] 04/15/24

[MANUFAC] LSI INDUSTRIES, INC.

[LUMCAT] CLRT14-FS1-UNV-20W-4000K

[TEST PROCEDURE] IESNA LM-79-19

[_ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

[_FACTORED] SCALED FROM ORIGINAL TEST DATA

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor

[_SEARCH_COLORTEMP] 4000

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 2290 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 116 |
| Total Luminaire Watts | 19.8 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.52 |
| Spacing Criterion (90-270) | 1.52 |
| Spacing Criterion (Diagonal) | 1.68 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 4.00 ft |
| Luminous Width (90-270) | 1.00 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 1749 | 1764 | 1844 |
| 55 | 2011 | 2100 | 2400 |
| 65 | 2290 | 2373 | 3034 |
| 75 | 2389 | 2680 | 3833 |
| 85 | 2653 | 2992 | 4658 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : CLRT14-FS1-UNV-20W-4000K.IES

CANDELA TABULATION

| | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|-------------|------------|-------------|-------------|-------------|-------------|
| 0.0 | 494 | 494 | 494 | 494 | 494 |
| 2.5 | 502 | 497 | 495 | 493 | 489 |
| 5.0 | 505 | 499 | 497 | 495 | 492 |
| 7.5 | 507 | 502 | 500 | 498 | 495 |
| 10.0 | 509 | 503 | 500 | 498 | 496 |
| 12.5 | 510 | 503 | 497 | 496 | 495 |
| 15.0 | 509 | 502 | 494 | 495 | 494 |
| 17.5 | 506 | 499 | 491 | 494 | 492 |
| 20.0 | 502 | 498 | 490 | 493 | 488 |
| 22.5 | 498 | 496 | 491 | 491 | 483 |
| 25.0 | 495 | 495 | 491 | 490 | 482 |
| 27.5 | 492 | 492 | 487 | 488 | 484 |
| 30.0 | 490 | 489 | 482 | 486 | 485 |
| 32.5 | 489 | 483 | 476 | 482 | 483 |
| 35.0 | 486 | 477 | 473 | 477 | 482 |
| 37.5 | 482 | 472 | 473 | 476 | 483 |
| 40.0 | 476 | 468 | 473 | 480 | 482 |
| 42.5 | 469 | 465 | 470 | 484 | 482 |
| 45.0 | 460 | 460 | 464 | 486 | 485 |
| 47.5 | 452 | 453 | 458 | 486 | 495 |
| 50.0 | 444 | 444 | 455 | 488 | 504 |
| 52.5 | 437 | 433 | 453 | 491 | 511 |
| 55.0 | 429 | 422 | 448 | 490 | 512 |
| 57.5 | 419 | 410 | 437 | 484 | 512 |
| 60.0 | 405 | 397 | 420 | 475 | 506 |
| 62.5 | 385 | 380 | 398 | 463 | 493 |
| 65.0 | 360 | 357 | 373 | 446 | 477 |
| 67.5 | 330 | 330 | 348 | 420 | 456 |
| 70.0 | 298 | 300 | 321 | 392 | 435 |
| 72.5 | 264 | 268 | 291 | 363 | 404 |
| 75.0 | 230 | 234 | 258 | 329 | 369 |
| 77.5 | 196 | 199 | 222 | 292 | 325 |
| 80.0 | 161 | 163 | 182 | 246 | 276 |
| 82.5 | 124 | 126 | 140 | 196 | 218 |
| 85.0 | 86 | 84 | 97 | 137 | 151 |
| 87.5 | 44 | 43 | 51 | 71 | 76 |
| 90.0 | 0 | 0 | 0 | 0 | 0 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : CLRT14-FS1-UNV-20W-4000K.IES

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 188.60 | N.A. | 8.20 |
| 0-30 | 415.54 | N.A. | 18.10 |
| 0-40 | 716.30 | N.A. | 31.30 |
| 0-60 | 1488.66 | N.A. | 65.00 |
| 0-80 | 2174.04 | N.A. | 95.00 |
| 0-90 | 2289.65 | N.A. | 100.00 |
| 10-90 | 2242.04 | N.A. | 97.90 |
| 20-40 | 527.70 | N.A. | 23.00 |
| 20-50 | 891.96 | N.A. | 39.00 |
| 40-70 | 1164.42 | N.A. | 50.90 |
| 60-80 | 685.38 | N.A. | 29.90 |
| 70-80 | 293.32 | N.A. | 12.80 |
| 80-90 | 115.61 | N.A. | 5.00 |
| 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 | 2289.65 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 47.62 |
| 10-20 | 140.99 |
| 20-30 | 226.94 |
| 30-40 | 300.76 |
| 40-50 | 364.26 |
| 50-60 | 408.10 |
| 60-70 | 392.06 |
| 70-80 | 293.32 |
| 80-90 | 115.61 |
| 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 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : CLRT14-FS1-UNV-20W-4000K.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 | 106 | 100 | 94 | 89 | 103 | 97 | 92 | 88 | 93 | 89 | 85 | 89 | 86 | 82 | 85 | 82 | 80 | 78 |
| 2 | 94 | 84 | 76 | 69 | 91 | 82 | 75 | 68 | 79 | 72 | 67 | 75 | 70 | 65 | 72 | 67 | 63 | 61 |
| 3 | 85 | 72 | 63 | 55 | 82 | 71 | 62 | 54 | 67 | 60 | 53 | 65 | 58 | 52 | 62 | 56 | 51 | 49 |
| 4 | 77 | 63 | 53 | 45 | 74 | 61 | 52 | 45 | 59 | 51 | 44 | 56 | 49 | 43 | 54 | 48 | 43 | 40 |
| 5 | 70 | 55 | 45 | 38 | 68 | 54 | 45 | 37 | 52 | 43 | 37 | 50 | 42 | 37 | 48 | 41 | 36 | 34 |
| 6 | 64 | 49 | 39 | 32 | 62 | 48 | 39 | 32 | 46 | 38 | 32 | 45 | 37 | 31 | 43 | 36 | 31 | 29 |
| 7 | 59 | 44 | 35 | 28 | 57 | 43 | 34 | 28 | 42 | 34 | 27 | 40 | 33 | 27 | 39 | 32 | 27 | 25 |
| 8 | 55 | 40 | 31 | 24 | 53 | 39 | 31 | 24 | 38 | 30 | 24 | 37 | 29 | 24 | 35 | 29 | 24 | 22 |
| 9 | 51 | 37 | 28 | 22 | 50 | 36 | 27 | 22 | 35 | 27 | 21 | 34 | 26 | 21 | 33 | 26 | 21 | 19 |
| 10 | 48 | 34 | 25 | 19 | 46 | 33 | 25 | 19 | 32 | 24 | 19 | 31 | 24 | 19 | 30 | 24 | 19 | 17 |

IES INDOOR REPORT
PHOTOMETRIC FILENAME : CLRT14-FS1-UNV-20W-4000K.IES

UGR TABLE - CORRECTED

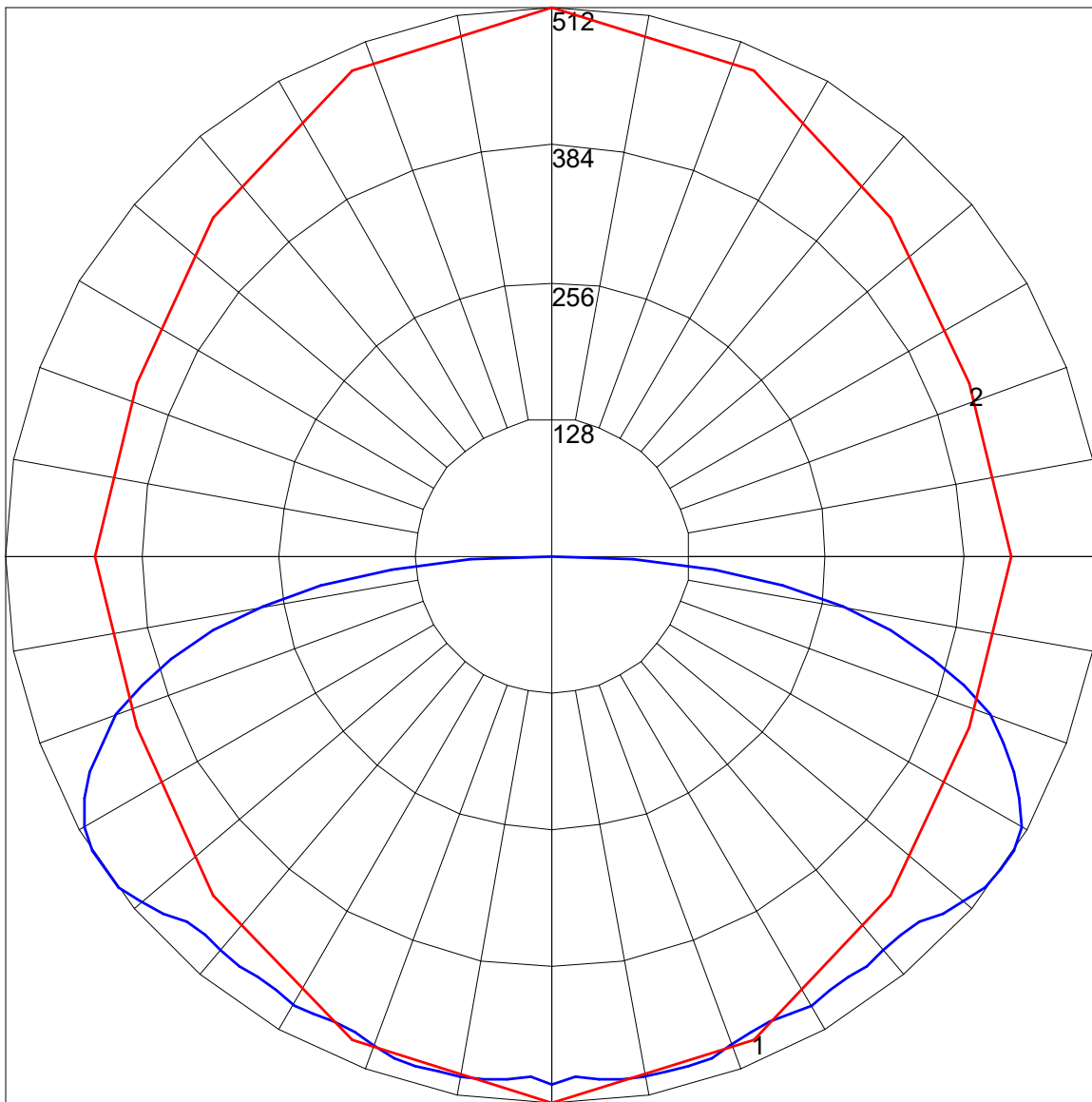
Reflectances

| | | | | | | | | | | |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 | 14.8 | 16.6 | 15.2 | 16.9 | 17.2 | 16.0 | 17.8 | 16.4 | 18.1 | 18.5 |
| | 3H | 17.3 | 19.0 | 17.7 | 19.3 | 19.7 | 19.0 | 20.7 | 19.4 | 21.0 | 21.4 |
| | 4H | 18.3 | 19.9 | 18.7 | 20.3 | 20.6 | 20.4 | 22.0 | 20.8 | 22.3 | 22.7 |
| | 6H | 19.2 | 20.7 | 19.6 | 21.1 | 21.4 | 21.6 | 23.1 | 22.0 | 23.5 | 23.9 |
| | 8H | 19.6 | 21.0 | 20.0 | 21.4 | 21.8 | 22.1 | 23.6 | 22.5 | 23.9 | 24.3 |
| | 12H | 19.8 | 21.2 | 20.3 | 21.6 | 22.0 | 22.5 | 23.9 | 23.0 | 24.3 | 24.7 |
| 4H | 2H | 15.8 | 17.3 | 16.1 | 17.7 | 18.1 | 16.7 | 18.3 | 17.1 | 18.6 | 19.0 |
| | 3H | 18.5 | 19.8 | 18.9 | 20.2 | 20.6 | 19.9 | 21.3 | 20.3 | 21.7 | 22.1 |
| | 4H | 19.6 | 20.9 | 20.1 | 21.3 | 21.7 | 21.5 | 22.7 | 21.9 | 23.1 | 23.6 |
| | 6H | 20.6 | 21.7 | 21.1 | 22.2 | 22.6 | 22.9 | 24.0 | 23.3 | 24.4 | 24.9 |
| | 8H | 21.0 | 22.1 | 21.5 | 22.5 | 23.0 | 23.5 | 24.5 | 23.9 | 25.0 | 25.4 |
| | 12H | 21.4 | 22.3 | 21.9 | 22.8 | 23.3 | 24.0 | 24.9 | 24.5 | 25.4 | 25.9 |
| 8H | 4H | 20.3 | 21.3 | 20.7 | 21.7 | 22.2 | 21.8 | 22.9 | 22.3 | 23.3 | 23.8 |
| | 6H | 21.4 | 22.3 | 21.9 | 22.8 | 23.3 | 23.4 | 24.3 | 23.9 | 24.8 | 25.3 |
| | 8H | 21.9 | 22.7 | 22.4 | 23.2 | 23.7 | 24.2 | 25.0 | 24.7 | 25.5 | 25.9 |
| | 12H | 22.4 | 23.1 | 22.9 | 23.6 | 24.1 | 24.8 | 25.5 | 25.3 | 26.0 | 26.6 |
| 12H | 4H | 20.4 | 21.4 | 20.9 | 21.8 | 22.3 | 21.9 | 22.8 | 22.4 | 23.3 | 23.8 |
| | 6H | 21.7 | 22.5 | 22.2 | 22.9 | 23.4 | 23.5 | 24.3 | 24.1 | 24.8 | 25.3 |
| | 8H | 22.2 | 22.9 | 22.7 | 23.4 | 24.0 | 24.3 | 25.0 | 24.8 | 25.5 | 26.1 |

Maximum UGR = 26.6

POLAR GRAPH



Maximum Candela = 512 Located At Horizontal Angle = 90, Vertical Angle = 55
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (55) (Through Max. Cd.)