

Indoor Distribution Test Report

Picasso Lighting Industries, LLC

46 Sellers St.
Kearny, NJ 07032

Photopia Photometric Analysis & Optical Design

Catalog Number

TRU-L-4'-D3-I7-30K-80-OPL-W

(White Housing – Direct / Indirect – Opal Lens)

Test Number

IES-P00003

Test Date

2017-01-12

The results contained in this report pertain only to the tested sample.
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| | |
|-------------------------------|--|
| Luminaire Description: | Aluminum, Extruded Housing, Direct / Indirect w/ Opal Lens |
| Lamp: | LED (3000K, 80+ CRI) |
| Installation: | Suspension from Ceiling |
| Luminous Length: | 47.50 in |
| Luminous Width: | 2.75 in |
| Luminous Height: | 0.00 in |



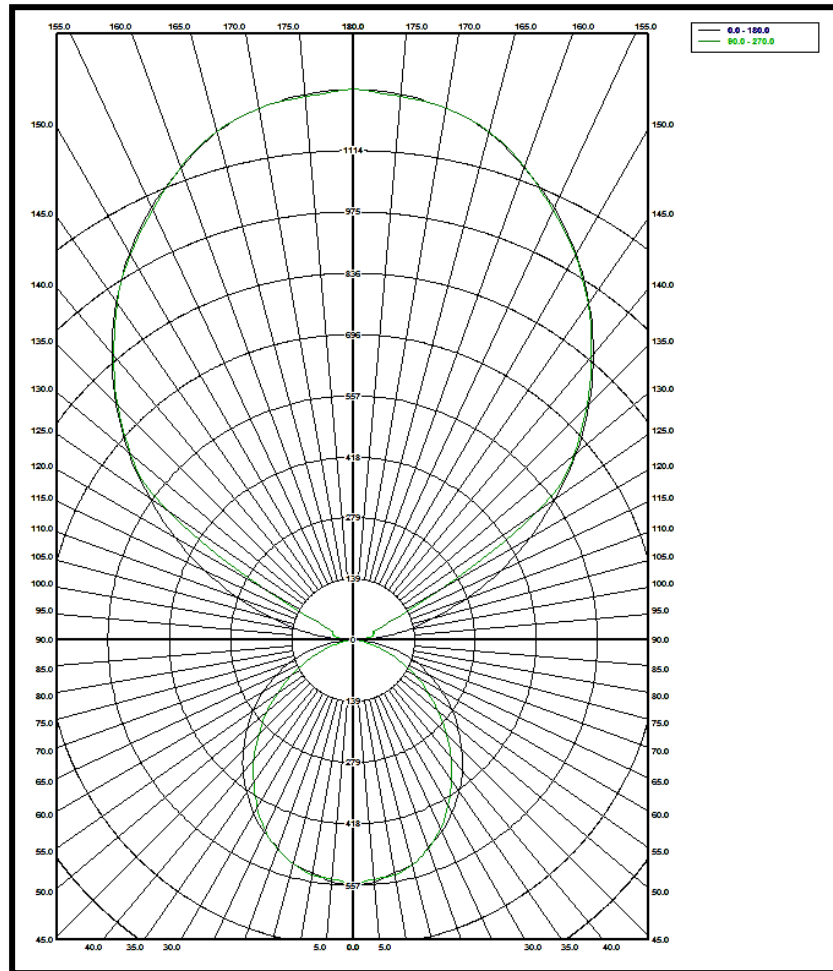
Image may differ slightly from actual unit

Summary of Results

| | |
|--------------------------------|-----------------|
| System Power: | 45.3W |
| Total Luminaire Output: | 4409 Lumens |
| Luminaire Efficacy: | 97 lm/W |
| Max Candela: | 1253.68 Candela |

Calculated results may not be representative of field performance
Ballast factors have not been applied

Polar Plot



Zonal Lumen Summary

| Zone | Lumens | % Fixture | Zone | Lumens | % Fixture |
|-------|---------|-----------|---------|---------|-----------|
| 0-10 | 52.27 | 1.2% | 90-100 | 27.52 | 0.6% |
| 10-20 | 148.13 | 3.4% | 100-110 | 100.67 | 2.3% |
| 20-30 | 220.57 | 5.0% | 110-120 | 261.23 | 5.9% |
| 30-40 | 257.38 | 5.8% | 120-130 | 488.54 | 11.1% |
| 40-50 | 255.41 | 5.8% | 130-140 | 585.79 | 13.3% |
| 50-60 | 218.29 | 5.0% | 140-150 | 586.4 | 13.3% |
| 60-70 | 154.29 | 3.5% | 150-160 | 499.73 | 11.3% |
| 70-80 | 77.88 | 1.8% | 160-170 | 336.74 | 7.6% |
| 80-90 | 20.01 | 0.5% | 170-180 | 118.38 | 2.7% |
| 0-90 | 1404.23 | 31.8% | 0-180 | 4409.23 | 100.0% |

Candela Distribution

Horizontal Angle (Degrees)

| | 0 | 22.5 | 45 | 67.5 | 90 | 112.5 | 135 | 157.5 | 180 | 202.5 | 225 | 247.5 | 270 | 292.5 | 315 | 337.5 |
|-----|------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
| 0 | 555 | 555 | 555 | 555 | 555 | 555 | 555 | 555 | 555 | 555 | 555 | 555 | 555 | 555 | 555 | 555 |
| 5 | 552 | 554 | 554 | 550 | 546 | 550 | 554 | 554 | 552 | 554 | 554 | 550 | 546 | 550 | 554 | 554 |
| 10 | 537 | 538 | 539 | 542 | 541 | 542 | 539 | 538 | 537 | 538 | 539 | 542 | 541 | 542 | 539 | 538 |
| 15 | 526 | 526 | 525 | 526 | 527 | 526 | 525 | 526 | 526 | 526 | 525 | 526 | 527 | 526 | 525 | 526 |
| 20 | 503 | 507 | 504 | 505 | 504 | 505 | 504 | 507 | 503 | 507 | 504 | 505 | 504 | 505 | 504 | 507 |
| 25 | 480 | 482 | 482 | 478 | 475 | 478 | 482 | 482 | 480 | 482 | 482 | 478 | 475 | 478 | 482 | 482 |
| 30 | 454 | 455 | 451 | 439 | 436 | 439 | 451 | 455 | 454 | 455 | 451 | 439 | 436 | 439 | 451 | 455 |
| 35 | 423 | 424 | 415 | 400 | 394 | 400 | 415 | 424 | 423 | 424 | 415 | 400 | 394 | 400 | 415 | 424 |
| 40 | 390 | 389 | 375 | 357 | 351 | 357 | 375 | 389 | 390 | 389 | 375 | 357 | 351 | 357 | 375 | 389 |
| 45 | 352 | 353 | 332 | 312 | 304 | 312 | 332 | 353 | 352 | 353 | 332 | 312 | 304 | 312 | 332 | 353 |
| 50 | 314 | 312 | 288 | 266 | 258 | 266 | 288 | 312 | 314 | 312 | 288 | 266 | 258 | 266 | 288 | 312 |
| 55 | 277 | 270 | 242 | 221 | 211 | 221 | 242 | 270 | 277 | 270 | 242 | 221 | 211 | 221 | 242 | 270 |
| 60 | 236 | 227 | 197 | 174 | 166 | 174 | 197 | 227 | 236 | 227 | 197 | 174 | 166 | 174 | 197 | 227 |
| 65 | 197 | 183 | 151 | 129 | 122 | 129 | 151 | 183 | 197 | 183 | 151 | 129 | 122 | 129 | 151 | 183 |
| 70 | 156 | 138 | 107 | 87 | 82 | 87 | 107 | 138 | 156 | 138 | 107 | 87 | 82 | 87 | 107 | 138 |
| 75 | 114 | 94 | 65 | 49 | 45 | 49 | 65 | 94 | 114 | 94 | 65 | 49 | 45 | 49 | 65 | 94 |
| 80 | 72 | 51 | 29 | 27 | 27 | 27 | 29 | 51 | 72 | 51 | 29 | 27 | 27 | 27 | 29 | 51 |
| 85 | 28 | 16 | 14 | 14 | 14 | 14 | 14 | 16 | 28 | 16 | 14 | 14 | 14 | 14 | 14 | 16 |
| 90 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 95 | 45 | 18 | 21 | 21 | 21 | 21 | 21 | 18 | 45 | 18 | 21 | 21 | 21 | 21 | 21 | 18 |
| 100 | 119 | 56 | 34 | 39 | 40 | 39 | 34 | 56 | 119 | 56 | 34 | 39 | 40 | 39 | 34 | 56 |
| 105 | 190 | 154 | 41 | 45 | 47 | 45 | 41 | 154 | 190 | 154 | 41 | 45 | 47 | 45 | 41 | 154 |
| 110 | 277 | 281 | 108 | 49 | 50 | 49 | 108 | 281 | 277 | 281 | 108 | 49 | 50 | 49 | 108 | 281 |
| 115 | 371 | 378 | 303 | 99 | 70 | 99 | 303 | 378 | 371 | 378 | 303 | 99 | 70 | 99 | 303 | 378 |
| 120 | 468 | 474 | 470 | 335 | 231 | 335 | 470 | 474 | 468 | 474 | 470 | 335 | 231 | 335 | 470 | 474 |
| 125 | 564 | 567 | 570 | 551 | 522 | 551 | 570 | 567 | 564 | 567 | 570 | 551 | 522 | 551 | 570 | 567 |
| 130 | 665 | 664 | 666 | 661 | 659 | 661 | 666 | 664 | 665 | 664 | 666 | 661 | 659 | 661 | 666 | 664 |
| 135 | 761 | 761 | 760 | 759 | 756 | 759 | 760 | 761 | 761 | 761 | 760 | 759 | 756 | 759 | 760 | 761 |
| 140 | 852 | 854 | 853 | 850 | 846 | 850 | 853 | 854 | 852 | 854 | 853 | 850 | 846 | 850 | 853 | 854 |
| 145 | 938 | 940 | 941 | 937 | 935 | 937 | 941 | 940 | 938 | 940 | 941 | 937 | 935 | 937 | 941 | 940 |
| 150 | 1016 | 1019 | 1017 | 1014 | 1013 | 1014 | 1017 | 1019 | 1016 | 1019 | 1017 | 1014 | 1013 | 1014 | 1017 | 1019 |
| 155 | 1086 | 1088 | 1084 | 1084 | 1080 | 1084 | 1084 | 1088 | 1086 | 1088 | 1084 | 1084 | 1080 | 1084 | 1084 | 1088 |
| 160 | 1143 | 1147 | 1144 | 1143 | 1146 | 1143 | 1144 | 1147 | 1143 | 1147 | 1144 | 1143 | 1146 | 1143 | 1144 | 1147 |
| 165 | 1197 | 1196 | 1192 | 1197 | 1199 | 1197 | 1192 | 1196 | 1197 | 1196 | 1192 | 1197 | 1199 | 1197 | 1192 | 1196 |
| 170 | 1229 | 1230 | 1229 | 1228 | 1230 | 1228 | 1229 | 1230 | 1229 | 1230 | 1229 | 1228 | 1230 | 1228 | 1229 | 1230 |
| 175 | 1246 | 1251 | 1243 | 1243 | 1242 | 1243 | 1243 | 1251 | 1246 | 1251 | 1243 | 1243 | 1242 | 1243 | 1243 | 1251 |
| 180 | 1254 | 1254 | 1254 | 1254 | 1254 | 1254 | 1254 | 1254 | 1254 | 1254 | 1254 | 1254 | 1254 | 1254 | 1254 | 1254 |

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

| ANGLES | 0-Deg | 45-Deg | 90-Deg |
|--------|-------|--------|--------|
| 0 | 6585 | 6585 | 6585 |
| 45 | 5247 | 2112 | 1601 |
| 55 | 4845 | 1504 | 1059 |
| 65 | 4338 | 940 | 602 |
| 75 | 3542 | 417 | 223 |
| 85 | 1554 | 95 | 72 |

Coefficients of Utilization – Zonal Cavity Method

| Effective Floor Cavity Reflectance 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 |
| RCR | Values are in Lumens delivered to the Task Plane | | | | | | | | | | | | | | | | | |
| 0 | 4542 | 4542 | 4542 | 4542 | 4101 | 4101 | 4101 | 4101 | 3219 | 3219 | 3219 | 2469 | 2469 | 2469 | 1720 | 1720 | 1720 | 1411 |
| 1 | 4145 | 3968 | 3792 | 3660 | 3704 | 3571 | 3439 | 3307 | 2822 | 2734 | 2646 | 2161 | 2116 | 2028 | 1543 | 1499 | 1455 | 1190 |
| 2 | 3748 | 3439 | 3175 | 2998 | 3395 | 3131 | 2910 | 2734 | 2469 | 2337 | 2205 | 1896 | 1808 | 1720 | 1367 | 1323 | 1235 | 1014 |
| 3 | 3439 | 3042 | 2734 | 2469 | 3086 | 2734 | 2469 | 2249 | 2205 | 1984 | 1852 | 1676 | 1543 | 1455 | 1190 | 1146 | 1058 | 838 |
| 4 | 3131 | 2690 | 2337 | 2072 | 2822 | 2425 | 2161 | 1896 | 1940 | 1720 | 1587 | 1499 | 1367 | 1235 | 1102 | 970 | 926 | 750 |
| 5 | 2866 | 2381 | 2028 | 1808 | 2601 | 2161 | 1852 | 1631 | 1720 | 1543 | 1367 | 1323 | 1190 | 1058 | 970 | 882 | 794 | 617 |
| 6 | 2646 | 2116 | 1808 | 1543 | 2381 | 1940 | 1631 | 1411 | 1543 | 1323 | 1190 | 1190 | 1058 | 926 | 882 | 794 | 705 | 573 |
| 7 | 2425 | 1940 | 1587 | 1367 | 2205 | 1764 | 1455 | 1235 | 1411 | 1190 | 1014 | 1102 | 926 | 838 | 794 | 705 | 617 | 485 |
| 8 | 2249 | 1764 | 1411 | 1190 | 2028 | 1587 | 1279 | 1102 | 1279 | 1058 | 926 | 1014 | 838 | 750 | 750 | 617 | 573 | 441 |
| 9 | 2116 | 1587 | 1279 | 1058 | 1896 | 1455 | 1146 | 970 | 1190 | 970 | 794 | 926 | 750 | 661 | 661 | 573 | 485 | 397 |
| 10 | 1984 | 1455 | 1146 | 926 | 1764 | 1323 | 1058 | 882 | 1058 | 882 | 750 | 838 | 705 | 573 | 617 | 529 | 441 | 353 |

