

Photometric Report - (ecs-aur4-mn-654-unv-32h-00w) - Page 1 of 4

Tue Apr 24 12:22:17 2012

IESNA:LM-63-1995

Photopia 2.0.0.17 PHOTOMETRIC REPORT

PROJECT: ecs-aur4-mn-654-unv-32h-00w

OPTIONS:

Spawning 1 rays for each reaction.
Random number generator seed: 8.
Tracing 5 reflections.
Stop tracing ray at 1.0% of initial magnitude.
Tracing 499416 initial lamp rays.
Photometric test distance of 20.00 feet.

LUMENS EXITING SYSTEM:

| Lumens(%) | Reflection |
|---------------|------------|
| 8663(28.9%) | 0 |
| 14614(48.7%) | 1 |
| 2211(7.4%) | 2 |
| 1358(4.5%) | 3 |
| 424(1.4%) | 4 |
| 299(1.0%) | 5 |
| 27572(91.9%) | Total |

LUMEN INTERACTION WITH SYSTEM:

| Absorbed(%) | Incident(%) | Layer Name |
|-------------|---------------|---------------|
| 347(1.2%) | 5308(17.7%) | LAMP-F54T5H01 |
| 12(0.0%) | 191(0.6%) | LAMP-F54T5H02 |
| 1493(5.0%) | 26684(88.9%) | Refl-Poly1 |
| 1853(6.2%) | 32184(107.3%) | Total |

| Absorbed(%) | Incident(%) | Material Name |
|-------------|---------------|---------------|
| 359(1.2%) | 5499(18.3%) | PHOSGLAS |
| 1493(5.0%) | 26684(88.9%) | ALMIRO04 |
| 1853(6.2%) | 32184(107.3%) | Total |

UNACCOUNTED LUMENS:

reached interreflection limit: 574.37 (1.9%)
fell below continuation minimum: 0.00 (0.0%)
could not find in/out refractor facet: 0.00 (0.0%)
reached try limit for scatter bounce: 0.00 (0.0%)
lost elsewhere(i.e. outside distrib): 0.00 (0.0%)

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Number of Lamps: 6 Lumens per Lamp: 5000
Ballast Factor: 1.00 Ballast-Lamp Photometric Factor: 1.00
Luminaire Width: 1.9257 Length: 4.0000 Height: 0.2057
Photometry Type: C Units: feet

Candela Distribution:

| | 0.00 | 22.50 | 45.00 | 67.50 | 90.00 |
|-------|------|-------|-------|-------|-------|
| 0.00 | 6551 | 6551 | 6551 | 6551 | 6551 |
| 5.00 | 6164 | 6392 | 6579 | 7046 | 7280 |
| 10.00 | 5936 | 6475 | 7477 | 7771 | 7991 |
| 15.00 | 6381 | 7002 | 8185 | 9150 | 9330 |
| 20.00 | 6099 | 7281 | 8784 | 8889 | 8464 |
| 25.00 | 5922 | 7562 | 8433 | 8656 | 9639 |
| 30.00 | 5494 | 7548 | 8338 | 10411 | 11348 |
| 35.00 | 5506 | 7276 | 8953 | 12053 | 13107 |
| 40.00 | 5284 | 7100 | 10198 | 12464 | 12553 |
| 45.00 | 4762 | 6756 | 10701 | 11198 | 11101 |
| 50.00 | 4414 | 6881 | 9944 | 8726 | 7317 |
| 55.00 | 4135 | 6727 | 8142 | 4522 | 3113 |
| 60.00 | 3445 | 6423 | 4891 | 1173 | 450 |
| 65.00 | 2890 | 5192 | 1690 | 71.2 | 0.920 |
| 70.00 | 2421 | 3323 | 186 | 0.000 | 0.000 |
| 75.00 | 2062 | 1350 | 1.19 | 0.000 | 0.000 |
| 80.00 | 1364 | 239 | 0.000 | 0.000 | 0.000 |
| 85.00 | 433 | 1.63 | 0.000 | 0.000 | 0.000 |
| 90.00 | 11.3 | 0.000 | 0.000 | 0.000 | 0.000 |

Zonal Lumens

| Cone | Between | Lumens |
|------|------------|---------|
| 0.0 | 0.0- 2.5 | 39.18 |
| 5.0 | 2.5- 7.5 | 319.35 |
| 10.0 | 7.5- 12.5 | 682.62 |
| 15.0 | 12.5- 17.5 | 1141.76 |
| 20.0 | 17.5- 22.5 | 1510.83 |
| 25.0 | 22.5- 27.5 | 1878.22 |
| 30.0 | 27.5- 32.5 | 2378.79 |
| 35.0 | 32.5- 37.5 | 2954.39 |
| 40.0 | 37.5- 42.5 | 3407.11 |
| 45.0 | 42.5- 47.5 | 3545.23 |
| 50.0 | 47.5- 52.5 | 3297.92 |
| 55.0 | 52.5- 57.5 | 2583.42 |
| 60.0 | 57.5- 62.5 | 1712.93 |
| 65.0 | 62.5- 67.5 | 1043.03 |
| 70.0 | 67.5- 72.5 | 607.80 |
| 75.0 | 72.5- 77.5 | 315.35 |
| 80.0 | 77.5- 82.5 | 124.37 |
| 85.0 | 82.5- 87.5 | 29.76 |
| 90.0 | 87.5- 92.5 | 0.77 |

Zonal Lumen Summary

| Zone | Lumens | %Lamp | %Fixt |
|--------|--------|-------|-------|
| 0- 30 | 6716 | 22.4 | 24.4 |
| 0- 40 | 12564 | 41.9 | 45.6 |
| 0- 60 | 24584 | 81.9 | 89.2 |
| 0- 90 | 27572 | 91.9 | 100.0 |
| 90-120 | 0 | 0.0 | 0.0 |
| 90-130 | 0 | 0.0 | 0.0 |
| 90-150 | 0 | 0.0 | 0.0 |
| 90-180 | 0 | 0.0 | 0.0 |
| 0-180 | 27573 | 91.9 | 100.0 |

Total Luminaire Optical Efficiency = 91.9%

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Luminaire Spacing Criterion:

| | |
|-------|--------|
| 0 deg | 90 deg |
| 1.28 | 2.10 |

Average Luminaire Luminance (cd/m²):

| | | | |
|----|---------|----------|----------|
| | 0 | 45 | 90 |
| 0 | 9155.05 | 9155.05 | 9155.05 |
| 45 | 8951.51 | 19019.97 | 19821.59 |
| 50 | 9042.58 | 19074.69 | 14112.17 |
| 55 | 9384.07 | 17104.01 | 6581.56 |
| 60 | 8839.77 | 11450.39 | 1060.51 |
| 65 | 8607.60 | 4505.93 | 2.48 |
| 70 | 8668.96 | 581.01 | 0.00 |
| 75 | 9343.12 | 4.53 | 0.00 |
| 80 | 8500.71 | 0.00 | 0.00 |
| 85 | 4370.28 | 0.00 | 0.00 |

Coefficients of Utilization - Zonal Cavity Method:

pfc = 0.20

| | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| pcc | .8 | | | | .7 | | | | .5 | | | |
| pw | .7 | .5 | .3 | .1 | .7 | .5 | .3 | .1 | .5 | .3 | .1 | |
| RCR | | | | | | | | | | | | |
| 0 | 109 | 109 | 109 | 109 | 106 | 106 | 106 | 106 | 102 | 102 | 102 | |
| 1 | 101 | 97 | 94 | 91 | 99 | 95 | 92 | 89 | 91 | 89 | 86 | |
| 2 | 92 | 86 | 80 | 75 | 90 | 84 | 79 | 74 | 81 | 76 | 73 | |
| 3 | 84 | 75 | 68 | 63 | 82 | 74 | 67 | 62 | 71 | 66 | 61 | |
| 4 | 77 | 67 | 59 | 53 | 75 | 65 | 58 | 53 | 63 | 57 | 52 | |
| 5 | 71 | 59 | 51 | 45 | 69 | 58 | 51 | 45 | 56 | 50 | 45 | |
| 6 | 65 | 53 | 45 | 39 | 63 | 52 | 45 | 39 | 51 | 44 | 39 | |
| 7 | 60 | 48 | 40 | 34 | 58 | 47 | 39 | 34 | 46 | 39 | 34 | |
| 8 | 56 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 35 | 30 | |
| 9 | 52 | 39 | 32 | 27 | 50 | 39 | 31 | 26 | 38 | 31 | 26 | |
| 10 | 48 | 36 | 29 | 24 | 47 | 35 | 28 | 24 | 34 | 28 | 23 | |

| | | | | | | | |
|-----|----|----|----|----|----|----|----|
| pcc | .3 | | | .1 | | | 0 |
| pw | .5 | .3 | .1 | .5 | .3 | .1 | 0 |
| RCR | | | | | | | |
| 0 | 97 | 97 | 97 | 93 | 93 | 93 | 91 |
| 1 | 88 | 86 | 84 | 84 | 83 | 81 | 79 |
| 2 | 78 | 74 | 71 | 75 | 72 | 69 | 67 |
| 3 | 69 | 64 | 60 | 66 | 63 | 59 | 57 |
| 4 | 61 | 56 | 51 | 59 | 54 | 51 | 49 |
| 5 | 55 | 49 | 44 | 53 | 48 | 44 | 42 |
| 6 | 49 | 43 | 38 | 48 | 42 | 38 | 36 |
| 7 | 44 | 38 | 33 | 43 | 37 | 33 | 31 |
| 8 | 40 | 34 | 29 | 39 | 33 | 29 | 28 |
| 9 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |
| 10 | 34 | 28 | 23 | 33 | 27 | 23 | 22 |