



UL Verification Services Inc.
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Indoor Distribution Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002

Prepared For
Jesco Lighting Group LLC

Vic Nasrudin
15 Harbor Park Dr
Port Washington, NY 11050

Catalog Number
RLR-6012-40

Order Number
10761525
Test Number
1046661

Test Date

2015-05-05

Prepared By

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Approved By

Eric Gaudreau, Engineering Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Aluminum housing / heatsink, white enamel reflector, frosted plastic lens
Lamp: 10 white LEDs
Mounting: Recessed

Luminaire



Luminaire Characteristics

Luminous Diameter: 5.75 in.

Summary of Results

| | |
|-------------------------|--------------|
| Total Luminaire Output: | 894.5 Lumens |
| Luminaire Efficacy: | 75.9 lm/w |
| Maximum Candela: | 567 Candela |

Electrical Data

| | |
|-------------------|-----------|
| Test Temperature: | 24.5 °C |
| Voltage: | 120.0 VAC |
| Current: | 0.09880 A |
| Power: | 11.79 W |
| Power Factor: | 0.998 |
| Frequency: | 60 Hz |
| Current THD: | 10.5 % |

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



Distribution - Goniophotometer

Distribution Test Conditions

| Temperature | Voltage | Current | Power | Power Factor | Frequency | Current THD |
|-------------|-----------|-----------|---------|--------------|-----------|-------------|
| 24.5 °C | 120.0 VAC | 0.09880 A | 11.79 W | 0.998 | 60 Hz | 10.5 % |

Summary of Results

Spacing Criteria

0-180: 1.15
90-270: 1.15

Total Lumen Output:

894.5 Lumens

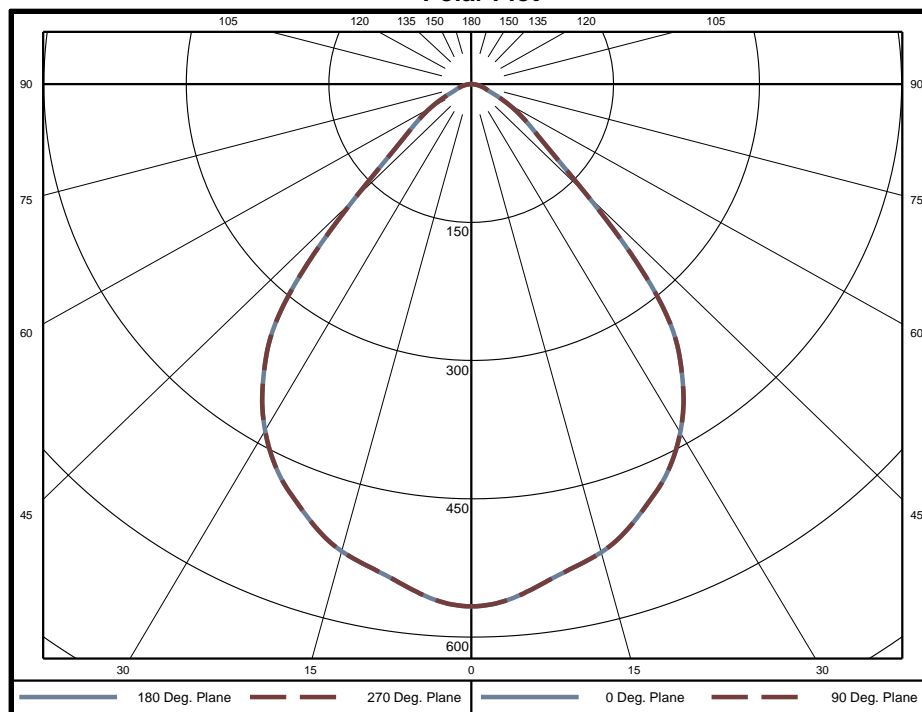
Luminaire Efficacy:

75.9 lm/w

Maximum Candela:

567 Candela

Polar Plot



Zonal Lumen Summary

| Zone | Lumens | % of Luminaire | Zone | Lumens | % of Luminaire | Zone | Lumens | % of Luminaire |
|-------|--------|----------------|---------|--------|----------------|---------|--------|----------------|
| 0-5 | 13.4 | 1.5% | 60-65 | 17.4 | 1.9% | 120-125 | 0 | 0.0% |
| 5-10 | 39.1 | 4.4% | 65-70 | 10.4 | 1.2% | 125-130 | 0 | 0.0% |
| 10-15 | 63.1 | 7.1% | 70-75 | 7.5 | 0.8% | 130-135 | 0 | 0.0% |
| 15-20 | 84.7 | 9.5% | 75-80 | 5.1 | 0.6% | 135-140 | 0 | 0.0% |
| 20-25 | 102.1 | 11.4% | 80-85 | 2.9 | 0.3% | 140-145 | 0 | 0.0% |
| 25-30 | 114.9 | 12.8% | 85-90 | 0.8 | 0.1% | 145-150 | 0 | 0.0% |
| 30-35 | 120.3 | 13.4% | 90-95 | 0 | 0.0% | 150-155 | 0 | 0.0% |
| 35-40 | 115.0 | 12.9% | 95-100 | 0 | 0.0% | 155-160 | 0 | 0.0% |
| 40-45 | 86.0 | 9.6% | 100-105 | 0 | 0.0% | 160-165 | 0 | 0.0% |
| 45-50 | 50.6 | 5.7% | 105-110 | 0 | 0.0% | 165-170 | 0 | 0.0% |
| 50-55 | 35.1 | 3.9% | 110-115 | 0 | 0.0% | 170-175 | 0 | 0.0% |
| 55-60 | 26.2 | 2.9% | 115-120 | 0 | 0.0% | 175-180 | 0 | 0.0% |

| Zone | Lumens | % of Luminaire |
|--------|--------|----------------|
| 0-40 | 653 | 73.0% |
| 0-60 | 851 | 95.1% |
| 0-90 | 895 | 100.0% |
| 90-180 | 0 | 0.0% |



Candela Tabulation
Horizontal Angle (Degrees)

| Vertical Angle (Degrees) | 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 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 | 566.5 |
| 5 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 | 557.2 |
| 10 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 |
| 15 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 | 525.1 |
| 20 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 | 501.3 |
| 25 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 | 472.9 |
| 30 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 | 434.2 |
| 35 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 | 380.5 |
| 40 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 | 299.5 |
| 45 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 | 167.5 |
| 50 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 | 96.5 |
| 55 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 |
| 60 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 | 45.9 |
| 65 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 | 26.6 |
| 70 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 |
| 75 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 |
| 80 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| 85 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| 90 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 110 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

| Vertical Angle (Degrees) | Horizontal Angle (Degrees) | | |
|--------------------------|----------------------------|-------|-------|
| | 0 | 45 | 90 |
| 0 | 33820 | 33820 | 33820 |
| 45 | 14140 | 14140 | 14140 |
| 55 | 7057 | 7057 | 7057 |
| 65 | 3759 | 3759 | 3759 |
| 75 | 2739 | 2739 | 2739 |
| 85 | 2255 | 2255 | 2255 |



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

| Ceiling Cavity Reflectance | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|----------------------------|--|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Wall Reflectance | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| Room Cavity Ratio (RCR) | ** Values are expressed as Lumens delivered to the task surface ** | | | | | | | | | | | | | | | | | |
| 0 | 1065 | 1065 | 1065 | 1065 | 1040 | 1040 | 1040 | 1040 | 994 | 994 | 994 | 952 | 952 | 952 | 913 | 913 | 913 | 895 |
| 1 | 1001 | 970 | 942 | 918 | 978 | 950 | 926 | 903 | 914 | 893 | 875 | 880 | 864 | 849 | 849 | 836 | 824 | 807 |
| 2 | 936 | 881 | 836 | 798 | 915 | 865 | 824 | 789 | 835 | 801 | 771 | 808 | 779 | 754 | 782 | 759 | 738 | 722 |
| 3 | 874 | 802 | 746 | 702 | 854 | 789 | 737 | 696 | 764 | 720 | 685 | 741 | 704 | 673 | 720 | 689 | 663 | 646 |
| 4 | 816 | 732 | 671 | 624 | 798 | 721 | 664 | 620 | 701 | 651 | 612 | 682 | 639 | 605 | 664 | 627 | 597 | 581 |
| 5 | 763 | 671 | 606 | 559 | 747 | 662 | 601 | 556 | 644 | 591 | 551 | 628 | 582 | 546 | 613 | 573 | 540 | 525 |
| 6 | 714 | 617 | 551 | 504 | 699 | 609 | 547 | 502 | 594 | 540 | 499 | 581 | 532 | 495 | 568 | 525 | 491 | 476 |
| 7 | 670 | 569 | 504 | 458 | 656 | 562 | 501 | 457 | 550 | 494 | 454 | 538 | 488 | 451 | 527 | 482 | 448 | 433 |
| 8 | 629 | 527 | 462 | 418 | 617 | 521 | 460 | 417 | 510 | 455 | 415 | 500 | 450 | 413 | 491 | 445 | 411 | 396 |
| 9 | 592 | 489 | 426 | 384 | 581 | 484 | 424 | 383 | 475 | 420 | 381 | 466 | 416 | 380 | 458 | 412 | 378 | 364 |
| 10 | 559 | 456 | 394 | 354 | 548 | 452 | 393 | 353 | 444 | 389 | 352 | 436 | 386 | 351 | 429 | 383 | 349 | 336 |

Cone of Light Tabulation

| Mounting Height | Footcandles at Nadir | Diameter (Feet) |
|-----------------|----------------------|-----------------|
| 4.00 | 35.4 | 4.60 |
| 6.00 | 15.7 | 6.90 |
| 8.00 | 8.85 | 9.21 |
| 10.0 | 5.67 | 11.5 |
| 12.0 | 3.93 | 13.8 |
| 14.0 | 2.89 | 16.1 |
| 16.0 | 2.21 | 18.4 |

Cone of Light Plot

