

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: INVUE

Report Number: P148818

Luminaire Tested: **VWM-E05-LED-E1-RW-8030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P148818
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33677)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: VWM-E05-LED-E1-RW-8030
Description: VISION WALL MEDIUM LED LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (105) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13182.9 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

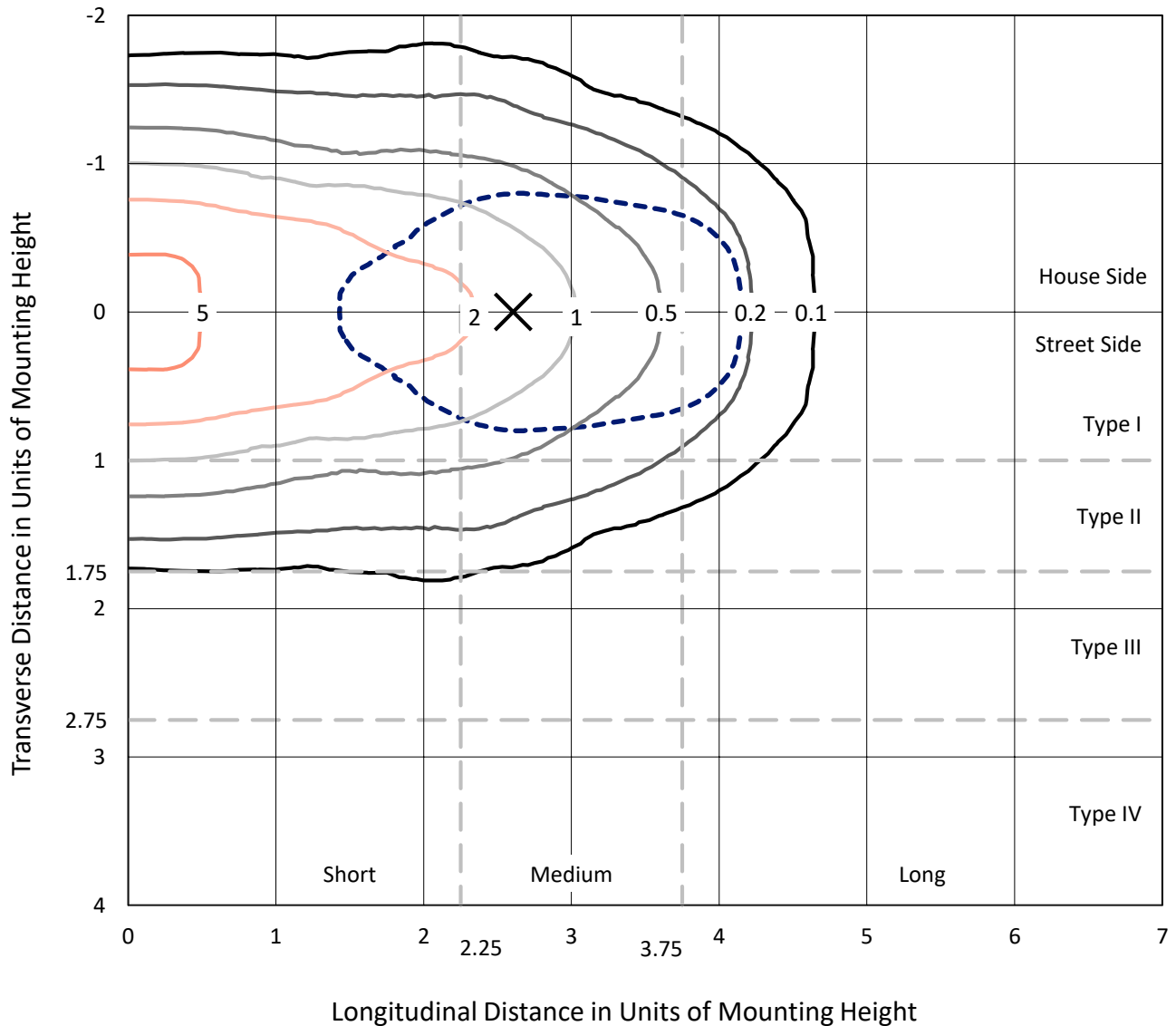
Input Watts (W): 127.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P148818
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Iso-Footcandle Lines of Horizontal Illumination

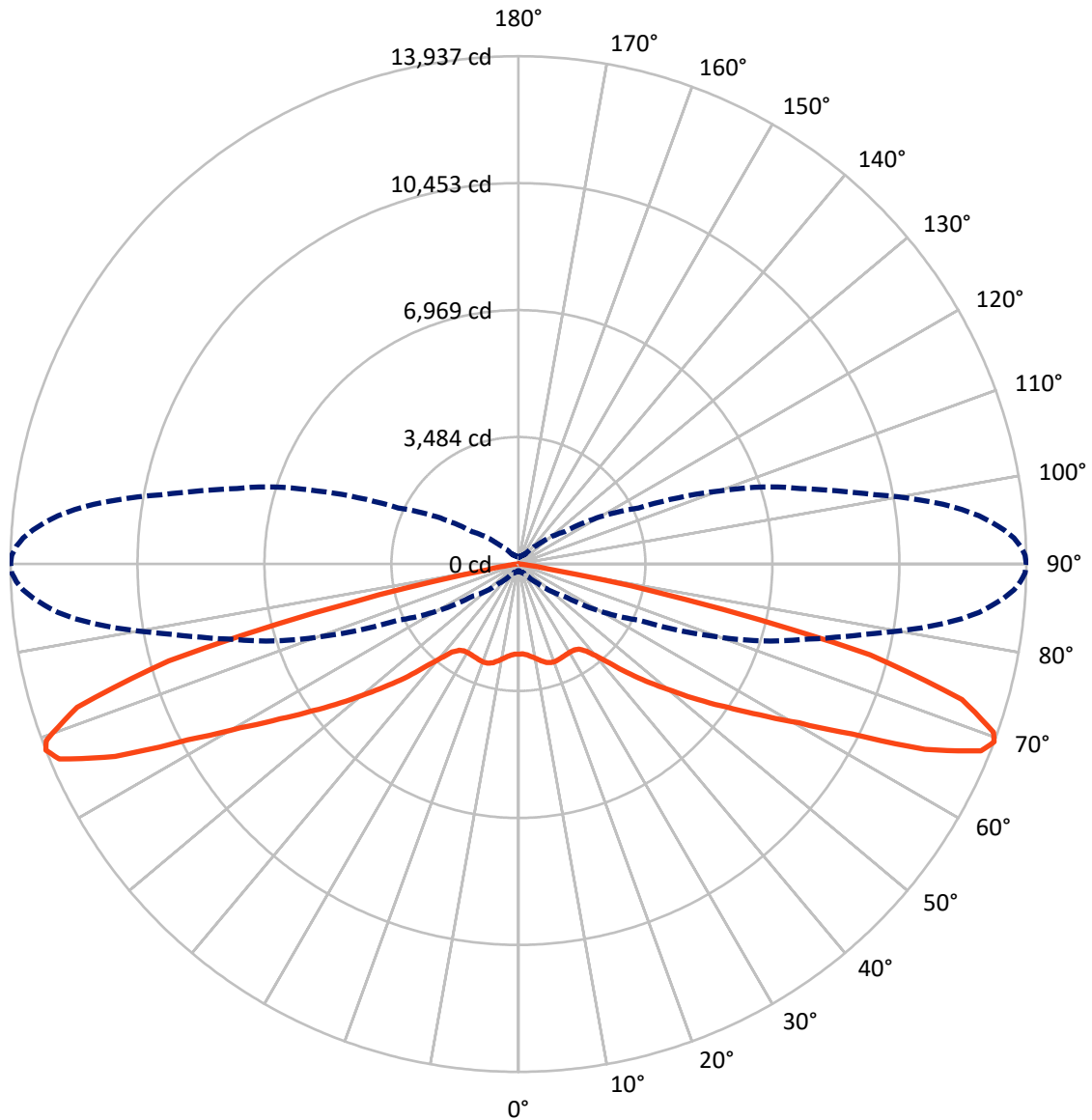
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.3 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 6591.4 | 0.0 | 6591.4 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 6591.4 | 0.0 | 6591.4 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 13182.9 | 0.0 | 13182.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 242.3 | 1.8 |
| 10°-20° | 764.3 | 5.8 |
| 20°-30° | 1238.3 | 9.4 |
| 30°-40° | 1543.2 | 11.7 |
| 40°-50° | 1928.4 | 14.6 |
| 50°-60° | 2381.2 | 18.1 |
| 60°-70° | 2958.8 | 22.4 |
| 70°-80° | 1964.2 | 14.9 |
| 80°-90° | 162.2 | 1.2 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 13182.9 | 100.0 |
| 0°-180° | 13182.9 | 100.0 |



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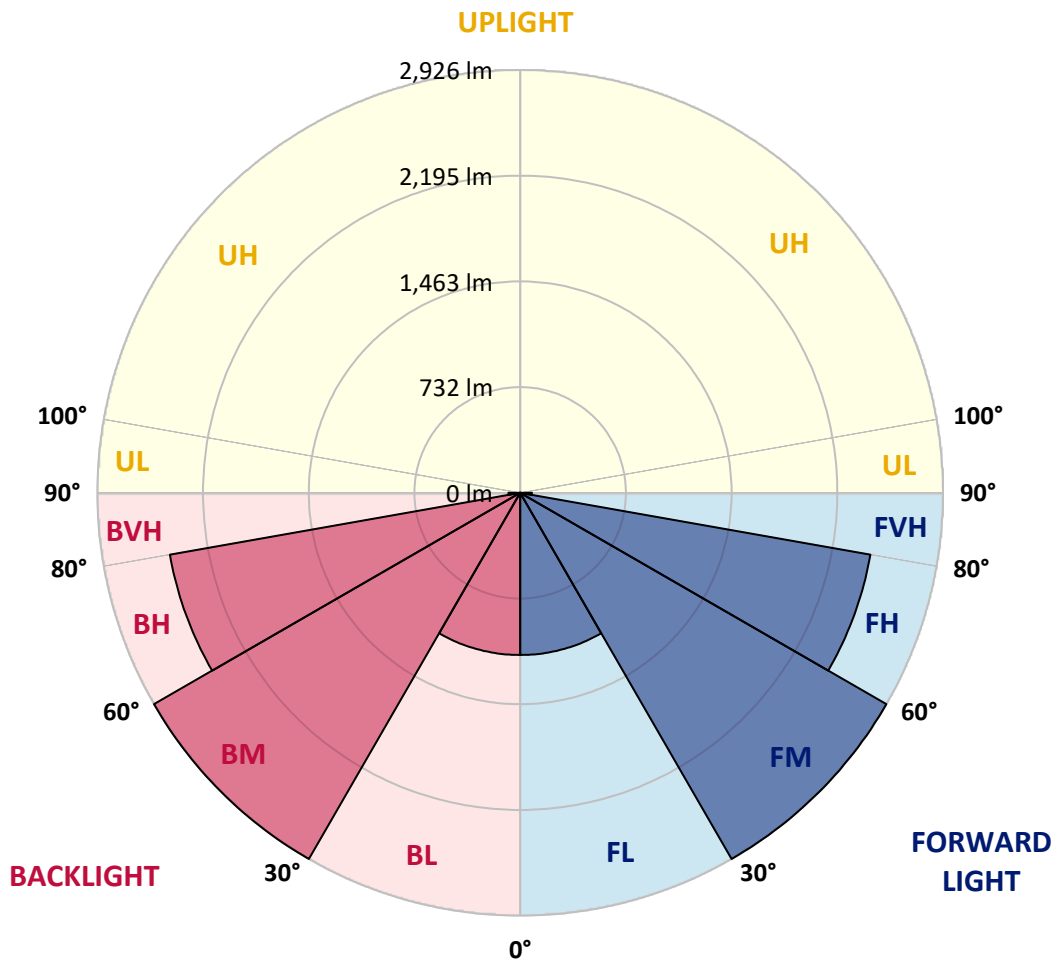
CATALOG NUMBER: VWM-E05-LED-E1-RW-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1122.4 | 8.5 | | | |
| FM (30°-60°) | 2926.4 | 22.2 | | | |
| FH (60°-80°) | 2461.5 | 18.7 | | | G2/5000 |
| FVH (80°-90°) | 81.1 | 0.6 | | | G1/100 |
| BL (0°-30°) | 1122.4 | 8.5 | B3/2500 | | |
| BM (30°-60°) | 2926.4 | 22.2 | B3/5000 | | |
| BH (60°-80°) | 2461.5 | 18.7 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 81.1 | 0.6 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type I Short





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CATALOG NUMBER: VWM-E05-LED-E1-RW-8030

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 66° | 67° | 68° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 |
| 2.5° | 2481.3 | 2483.4 | 2482.0 | 2484.9 | 2484.2 | 2484.2 | 2482.8 | 2479.9 | 2479.6 | 2479.2 | 2478.9 |
| 5° | 2505.2 | 2502.4 | 2506.7 | 2510.9 | 2509.4 | 2510.2 | 2509.5 | 2509.4 | 2509.2 | 2508.9 | 2508.6 |
| 7.5° | 2530.6 | 2529.9 | 2532.6 | 2544.0 | 2545.3 | 2549.6 | 2554.5 | 2558.0 | 2558.1 | 2558.3 | 2558.4 |
| 10° | 2552.4 | 2553.0 | 2560.1 | 2576.2 | 2584.7 | 2598.0 | 2611.4 | 2622.0 | 2622.8 | 2623.6 | 2624.3 |
| 12.5° | 2570.0 | 2570.6 | 2581.2 | 2606.6 | 2627.0 | 2652.2 | 2681.0 | 2697.2 | 2698.7 | 2700.1 | 2701.5 |
| 15° | 2571.4 | 2573.5 | 2591.8 | 2633.2 | 2674.0 | 2715.6 | 2750.0 | 2771.8 | 2772.9 | 2774.1 | 2775.2 |
| 17.5° | 2553.0 | 2554.4 | 2585.4 | 2646.6 | 2714.8 | 2779.6 | 2815.4 | 2825.2 | 2825.7 | 2826.1 | 2826.5 |
| 20° | 2505.2 | 2508.8 | 2552.4 | 2643.1 | 2747.2 | 2831.6 | 2868.9 | 2855.5 | 2854.2 | 2852.8 | 2851.5 |
| 22.5° | 2427.9 | 2427.1 | 2484.1 | 2606.6 | 2753.5 | 2872.4 | 2905.4 | 2870.3 | 2866.1 | 2862.0 | 2857.8 |
| 25° | 2302.6 | 2311.2 | 2378.0 | 2524.2 | 2717.6 | 2881.6 | 2931.4 | 2878.0 | 2872.0 | 2866.0 | 2860.1 |
| 27.5° | 2167.0 | 2171.8 | 2242.9 | 2399.8 | 2634.0 | 2849.8 | 2944.1 | 2893.5 | 2886.8 | 2880.1 | 2873.5 |
| 30° | 2008.7 | 2015.0 | 2091.0 | 2254.9 | 2499.6 | 2768.3 | 2940.6 | 2928.6 | 2920.8 | 2913.0 | 2905.2 |
| 32.5° | 1854.0 | 1861.0 | 1929.2 | 2108.6 | 2358.2 | 2656.4 | 2919.5 | 2978.6 | 2970.6 | 2962.5 | 2954.5 |
| 35° | 1693.6 | 1704.2 | 1787.2 | 1968.6 | 2221.8 | 2532.0 | 2887.1 | 3042.6 | 3038.2 | 3033.7 | 3029.3 |
| 37.5° | 1560.7 | 1562.8 | 1643.0 | 1833.6 | 2095.2 | 2413.1 | 2844.2 | 3123.5 | 3126.7 | 3130.0 | 3133.2 |
| 40° | 1412.2 | 1425.6 | 1505.8 | 1707.0 | 1980.6 | 2312.6 | 2803.4 | 3233.2 | 3250.0 | 3266.8 | 3283.6 |
| 42.5° | 1279.4 | 1280.8 | 1362.4 | 1569.8 | 1856.0 | 2231.6 | 2781.0 | 3365.4 | 3401.3 | 3437.3 | 3473.2 |
| 45° | 1139.4 | 1145.0 | 1218.9 | 1419.3 | 1712.6 | 2136.0 | 2780.2 | 3518.0 | 3575.4 | 3632.8 | 3690.2 |
| 47.5° | 1007.2 | 1009.2 | 1087.4 | 1273.8 | 1548.0 | 2002.4 | 2775.4 | 3681.9 | 3760.0 | 3838.2 | 3916.3 |
| 50° | 880.6 | 878.4 | 955.1 | 1134.4 | 1385.6 | 1827.2 | 2732.4 | 3867.6 | 3966.3 | 4064.9 | 4163.6 |
| 52.5° | 735.7 | 745.5 | 825.0 | 996.6 | 1237.8 | 1649.3 | 2607.2 | 4070.8 | 4188.9 | 4306.9 | 4424.9 |
| 55° | 593.6 | 597.8 | 682.9 | 843.3 | 1088.0 | 1483.4 | 2389.2 | 4258.0 | 4397.1 | 4536.2 | 4675.3 |
| 57.5° | 437.4 | 450.1 | 524.7 | 683.0 | 936.2 | 1343.4 | 2112.1 | 4355.0 | 4524.3 | 4693.6 | 4862.9 |
| 60° | 308.8 | 318.6 | 384.7 | 517.6 | 769.4 | 1196.4 | 1873.6 | 4300.8 | 4520.8 | 4740.8 | 4960.8 |
| 62.5° | 240.6 | 248.2 | 301.0 | 387.5 | 600.0 | 1049.4 | 1702.8 | 4125.7 | 4425.0 | 4724.4 | 5023.7 |
| 65° | 211.0 | 218.0 | 265.9 | 310.2 | 448.0 | 899.6 | 1609.2 | 3940.8 | 4336.4 | 4732.1 | 5127.8 |
| 67.5° | 190.6 | 199.0 | 240.5 | 271.5 | 365.0 | 784.9 | 1584.6 | 3824.0 | 4272.2 | 4720.3 | 5168.5 |
| 69° | 181.5 | 189.9 | 227.2 | 253.2 | 339.0 | 744.1 | 1542.4 | 3640.4 | 4086.0 | 4531.5 | 4977.1 |
| 70° | 175.8 | 182.9 | 217.3 | 244.0 | 330.5 | 716.0 | 1472.1 | 3411.1 | 3848.6 | 4286.2 | 4723.7 |
| 72.5° | 163.2 | 166.7 | 197.0 | 223.0 | 306.6 | 578.8 | 1132.4 | 2533.4 | 2912.7 | 3292.0 | 3671.3 |
| 75° | 144.2 | 148.4 | 176.6 | 201.8 | 239.2 | 359.4 | 716.7 | 1567.0 | 1850.2 | 2133.3 | 2416.5 |
| 77.5° | 124.5 | 128.0 | 152.6 | 192.8 | 185.6 | 224.4 | 428.3 | 872.2 | 1036.4 | 1200.6 | 1364.8 |
| 80° | 99.9 | 104.1 | 125.9 | 191.3 | 153.4 | 174.4 | 308.0 | 609.8 | 654.1 | 698.4 | 742.7 |
| 82.5° | 73.2 | 76.6 | 98.4 | 154.8 | 117.4 | 131.6 | 235.0 | 517.0 | 532.4 | 547.8 | 563.2 |
| 85° | 37.2 | 38.0 | 62.6 | 94.2 | 74.6 | 68.2 | 132.2 | 353.8 | 363.6 | 373.4 | 383.3 |
| 87.5° | 6.4 | 6.4 | 14.0 | 16.2 | 18.3 | 11.2 | 16.9 | 60.5 | 62.4 | 64.3 | 66.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P148818

CATALOG NUMBER: VWM-E05-LED-E1-RW-8030

CANDELA DISTRIBUTION (continued):

| | 69° | 70° | 71° | 72° | 73° | 74° | 75° | 76° | 77° | 78° | 79° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 |
| 2.5° | 2478.5 | 2478.2 | 2477.0 | 2477.2 | 2478.1 | 2477.6 | 2478.6 | 2478.7 | 2479.5 | 2476.9 | 2476.3 |
| 5° | 2508.4 | 2508.1 | 2507.9 | 2507.8 | 2508.4 | 2508.2 | 2508.8 | 2509.9 | 2509.6 | 2507.9 | 2507.6 |
| 7.5° | 2558.5 | 2558.7 | 2559.4 | 2558.7 | 2560.1 | 2559.4 | 2558.0 | 2560.2 | 2561.8 | 2561.9 | 2563.5 |
| 10° | 2625.1 | 2625.9 | 2628.3 | 2628.0 | 2630.4 | 2630.1 | 2630.4 | 2632.8 | 2634.5 | 2634.8 | 2636.5 |
| 12.5° | 2702.9 | 2704.3 | 2705.5 | 2706.8 | 2709.5 | 2707.9 | 2711.3 | 2712.7 | 2714.8 | 2719.1 | 2716.9 |
| 15° | 2776.3 | 2777.4 | 2781.2 | 2781.5 | 2783.9 | 2784.9 | 2788.0 | 2789.3 | 2789.8 | 2793.2 | 2793.8 |
| 17.5° | 2827.0 | 2827.4 | 2828.8 | 2828.1 | 2830.2 | 2829.5 | 2831.6 | 2832.7 | 2834.6 | 2836.4 | 2839.6 |
| 20° | 2850.2 | 2848.8 | 2848.1 | 2847.3 | 2845.8 | 2843.6 | 2844.2 | 2845.2 | 2845.5 | 2847.2 | 2849.6 |
| 22.5° | 2853.7 | 2849.5 | 2845.2 | 2842.4 | 2838.0 | 2834.5 | 2830.8 | 2831.1 | 2831.4 | 2831.0 | 2832.7 |
| 25° | 2854.1 | 2848.1 | 2841.4 | 2833.4 | 2827.4 | 2819.3 | 2812.6 | 2812.0 | 2810.0 | 2810.2 | 2811.0 |
| 27.5° | 2866.8 | 2860.1 | 2850.7 | 2841.4 | 2828.5 | 2817.7 | 2807.0 | 2803.2 | 2799.4 | 2797.0 | 2796.0 |
| 30° | 2897.4 | 2889.6 | 2878.5 | 2866.6 | 2852.6 | 2835.8 | 2820.4 | 2815.6 | 2810.1 | 2805.3 | 2801.2 |
| 32.5° | 2946.5 | 2938.5 | 2926.1 | 2913.7 | 2895.0 | 2878.4 | 2863.2 | 2855.5 | 2847.7 | 2839.3 | 2831.6 |
| 35° | 3024.8 | 3020.4 | 3009.5 | 2998.6 | 2984.9 | 2971.9 | 2958.1 | 2949.5 | 2936.5 | 2929.9 | 2920.5 |
| 37.5° | 3136.4 | 3139.6 | 3139.6 | 3141.1 | 3136.8 | 3130.5 | 3120.6 | 3111.5 | 3107.3 | 3089.7 | 3078.4 |
| 40° | 3300.4 | 3317.2 | 3332.6 | 3344.5 | 3355.0 | 3365.5 | 3374.6 | 3369.2 | 3370.9 | 3366.3 | 3359.5 |
| 42.5° | 3509.2 | 3545.1 | 3578.0 | 3610.8 | 3634.5 | 3671.6 | 3697.4 | 3705.6 | 3726.4 | 3734.5 | 3749.7 |
| 45° | 3747.6 | 3805.0 | 3860.1 | 3911.1 | 3958.5 | 4011.5 | 4063.1 | 4101.5 | 4143.4 | 4191.0 | 4238.5 |
| 47.5° | 3994.5 | 4072.6 | 4153.8 | 4220.3 | 4288.9 | 4367.3 | 4435.9 | 4493.7 | 4569.1 | 4638.8 | 4715.7 |
| 50° | 4262.3 | 4361.0 | 4453.4 | 4535.4 | 4623.6 | 4714.0 | 4807.9 | 4892.9 | 4994.8 | 5106.4 | 5227.3 |
| 52.5° | 4542.9 | 4660.9 | 4768.0 | 4870.8 | 4974.3 | 5077.9 | 5177.9 | 5297.8 | 5423.5 | 5570.9 | 5721.8 |
| 55° | 4814.4 | 4953.5 | 5075.0 | 5189.3 | 5307.9 | 5423.6 | 5526.8 | 5687.2 | 5841.4 | 6017.4 | 6214.5 |
| 57.5° | 5032.2 | 5201.4 | 5341.5 | 5477.3 | 5611.0 | 5734.1 | 5860.8 | 6041.8 | 6238.3 | 6444.0 | 6693.9 |
| 60° | 5180.8 | 5400.8 | 5579.6 | 5742.9 | 5907.0 | 6061.8 | 6207.5 | 6444.2 | 6677.9 | 6933.5 | 7244.6 |
| 62.5° | 5323.1 | 5622.4 | 5855.6 | 6078.3 | 6299.5 | 6498.3 | 6679.5 | 6977.2 | 7282.5 | 7598.5 | 7968.5 |
| 65° | 5523.5 | 5919.2 | 6262.7 | 6573.2 | 6879.4 | 7171.5 | 7442.6 | 7819.7 | 8205.3 | 8621.1 | 9062.9 |
| 67.5° | 5616.6 | 6064.8 | 6512.1 | 6930.6 | 7319.5 | 7689.4 | 8037.6 | 8493.5 | 8947.3 | 9429.2 | 9963.2 |
| 69° | 5422.6 | 5868.2 | 6346.4 | 6803.5 | 7233.2 | 7625.6 | 8002.4 | 8467.9 | 8939.7 | 9431.9 | 9970.5 |
| 70° | 5161.3 | 5598.8 | 6081.5 | 6559.3 | 6970.2 | 7379.1 | 7769.6 | 8231.5 | 8709.4 | 9202.9 | 9766.7 |
| 72.5° | 4050.6 | 4429.9 | 4900.6 | 5364.4 | 5776.7 | 6187.0 | 6566.2 | 7038.9 | 7519.9 | 8038.3 | 8572.1 |
| 75° | 2699.7 | 2982.8 | 3333.5 | 3763.7 | 4141.8 | 4504.4 | 4872.0 | 5271.7 | 5741.1 | 6168.3 | 6656.7 |
| 77.5° | 1529.1 | 1693.3 | 1897.0 | 2176.7 | 2448.0 | 2665.1 | 2927.2 | 3115.3 | 3387.8 | 3623.0 | 3871.5 |
| 80° | 787.0 | 831.3 | 892.1 | 959.2 | 997.5 | 991.4 | 1030.4 | 991.9 | 1000.4 | 968.9 | 935.3 |
| 82.5° | 578.6 | 594.0 | 621.4 | 634.9 | 633.6 | 589.3 | 542.2 | 477.0 | 419.5 | 359.1 | 303.7 |
| 85° | 393.1 | 403.0 | 409.9 | 420.3 | 417.3 | 398.2 | 355.8 | 299.2 | 243.9 | 195.7 | 156.6 |
| 87.5° | 68.1 | 70.0 | 69.5 | 75.3 | 75.5 | 70.1 | 57.7 | 49.3 | 41.5 | 31.0 | 21.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CATALOG NUMBER: VWM-E05-LED-E1-RW-8030

CANDELA DISTRIBUTION (continued):

| | 80° | 81° | 82° | 83° | 84° | 85° | 86° | 87° | 88° | 89° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 | 2470.1 |
| 2.5° | 2475.7 | 2475.7 | 2477.1 | 2475.7 | 2475.7 | 2475.7 | 2475.0 | 2476.4 | 2475.7 | 2473.6 | 2471.5 |
| 5° | 2508.0 | 2506.0 | 2505.2 | 2506.6 | 2508.0 | 2505.2 | 2507.4 | 2509.5 | 2506.0 | 2506.7 | 2505.2 |
| 7.5° | 2562.2 | 2561.5 | 2560.8 | 2562.2 | 2562.2 | 2561.5 | 2562.2 | 2560.1 | 2558.7 | 2560.8 | 2562.9 |
| 10° | 2634.6 | 2634.0 | 2635.4 | 2635.4 | 2638.1 | 2636.8 | 2636.0 | 2638.2 | 2636.8 | 2635.4 | 2636.1 |
| 12.5° | 2719.8 | 2717.6 | 2721.1 | 2721.1 | 2723.2 | 2723.2 | 2722.6 | 2723.2 | 2722.6 | 2720.4 | 2719.1 |
| 15° | 2795.8 | 2793.0 | 2793.6 | 2799.2 | 2798.5 | 2800.0 | 2800.0 | 2798.6 | 2797.8 | 2797.1 | 2797.8 |
| 17.5° | 2841.4 | 2840.0 | 2840.0 | 2842.9 | 2845.0 | 2844.2 | 2844.2 | 2844.2 | 2843.6 | 2844.2 | 2845.7 |
| 20° | 2849.9 | 2849.9 | 2850.5 | 2853.4 | 2856.9 | 2854.8 | 2854.8 | 2856.2 | 2854.8 | 2856.2 | 2856.9 |
| 22.5° | 2833.6 | 2835.1 | 2836.5 | 2840.0 | 2840.7 | 2840.7 | 2840.8 | 2841.4 | 2842.9 | 2842.8 | 2844.2 |
| 25° | 2811.2 | 2812.6 | 2814.7 | 2817.5 | 2820.4 | 2820.4 | 2820.4 | 2821.8 | 2821.8 | 2822.5 | 2823.1 |
| 27.5° | 2794.3 | 2795.8 | 2797.8 | 2800.6 | 2804.2 | 2804.2 | 2804.2 | 2805.6 | 2805.6 | 2806.2 | 2807.7 |
| 30° | 2796.5 | 2793.6 | 2795.7 | 2797.1 | 2799.2 | 2799.2 | 2798.5 | 2799.2 | 2799.9 | 2800.0 | 2800.6 |
| 32.5° | 2826.6 | 2820.4 | 2818.2 | 2817.5 | 2818.2 | 2816.1 | 2815.4 | 2814.0 | 2812.6 | 2812.6 | 2811.9 |
| 35° | 2906.8 | 2897.0 | 2896.3 | 2890.6 | 2885.0 | 2879.4 | 2880.2 | 2875.9 | 2877.3 | 2873.8 | 2871.0 |
| 37.5° | 3071.4 | 3060.1 | 3067.2 | 3055.2 | 3047.5 | 3041.8 | 3035.6 | 3027.1 | 3022.1 | 3028.5 | 3028.5 |
| 40° | 3366.2 | 3358.4 | 3356.3 | 3358.4 | 3351.4 | 3354.8 | 3339.4 | 3335.2 | 3326.0 | 3332.4 | 3340.8 |
| 42.5° | 3773.4 | 3768.4 | 3795.1 | 3800.1 | 3802.9 | 3807.1 | 3809.9 | 3786.7 | 3786.0 | 3781.1 | 3767.0 |
| 45° | 4276.2 | 4305.8 | 4304.4 | 4336.8 | 4338.1 | 4328.3 | 4332.5 | 4321.9 | 4317.7 | 4302.2 | 4321.2 |
| 47.5° | 4793.2 | 4849.4 | 4870.6 | 4877.6 | 4904.3 | 4910.6 | 4885.3 | 4876.8 | 4891.6 | 4866.3 | 4869.8 |
| 50° | 5348.1 | 5408.6 | 5457.8 | 5490.8 | 5509.8 | 5511.2 | 5492.3 | 5488.0 | 5501.5 | 5453.6 | 5476.1 |
| 52.5° | 5893.9 | 5985.3 | 6078.2 | 6127.4 | 6162.6 | 6165.4 | 6180.1 | 6162.6 | 6169.6 | 6158.3 | 6180.8 |
| 55° | 6432.0 | 6590.2 | 6699.2 | 6795.6 | 6856.8 | 6909.4 | 6914.4 | 6933.4 | 6934.8 | 6958.0 | 6934.8 |
| 57.5° | 6958.0 | 7130.3 | 7320.2 | 7491.1 | 7586.1 | 7645.8 | 7702.1 | 7778.8 | 7795.6 | 7786.6 | 7801.3 |
| 60° | 7579.0 | 7845.6 | 8103.7 | 8300.6 | 8464.5 | 8621.4 | 8705.8 | 8826.0 | 8845.0 | 8897.1 | 8852.1 |
| 62.5° | 8364.0 | 8750.8 | 9101.0 | 9366.2 | 9615.2 | 9859.2 | 10043.5 | 10136.3 | 10192.6 | 10301.6 | 10265.7 |
| 65° | 9568.0 | 10032.2 | 10495.8 | 10875.5 | 11224.3 | 11514.8 | 11794.8 | 11928.4 | 12076.1 | 12230.8 | 12259.0 |
| 67.5° | 10559.8 | 11134.4 | 11656.9 | 12119.7 | 12542.4 | 12865.2 | 13156.4 | 13387.8 | 13567.9 | 13681.8 | 13690.9 |
| 69° | 10604.8 | 11201.9 | 11769.4 | 12266.0 | 12707.0 | 13050.2 | 13356.8 | 13614.3 | 13789.4 | 13906.2 | 13937.1 |
| 70° | 10389.6 | 11000.7 | 11605.6 | 12107.0 | 12558.6 | 12909.6 | 13234.5 | 13480.0 | 13675.5 | 13794.4 | 13835.8 |
| 72.5° | 9179.1 | 9831.8 | 10478.2 | 10917.7 | 11379.1 | 11796.9 | 12057.1 | 12307.5 | 12583.2 | 12619.0 | 12733.0 |
| 75° | 7235.8 | 7784.4 | 8285.9 | 8622.1 | 9007.5 | 9382.4 | 9637.7 | 9703.8 | 9848.0 | 10029.4 | 9964.7 |
| 77.5° | 4193.2 | 4362.0 | 4685.5 | 4768.6 | 4698.2 | 4861.4 | 4915.6 | 4800.2 | 4794.6 | 4900.8 | 4689.8 |
| 80° | 929.1 | 876.4 | 942.5 | 893.2 | 894.6 | 896.0 | 881.3 | 875.6 | 886.2 | 875.6 | 860.9 |
| 82.5° | 257.4 | 249.0 | 250.4 | 247.6 | 252.5 | 249.0 | 246.8 | 252.5 | 251.8 | 251.1 | 256.0 |
| 85° | 123.8 | 122.4 | 120.2 | 119.6 | 116.8 | 113.2 | 107.6 | 107.6 | 110.4 | 106.2 | 108.3 |
| 87.5° | 16.2 | 15.5 | 15.5 | 18.3 | 16.2 | 13.4 | 13.4 | 13.4 | 12.7 | 12.7 | 12.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)