

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: P151073

Luminaire Tested: **VWM-F02-LED-E1-SL3-8030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P151073
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33679)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: VWM-F02-LED-E1-SL3-8030
Description: VISION WALL MEDIUM LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (14) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4230.8 lumens
Efficiency: N/A
Efficacy: 76.9 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

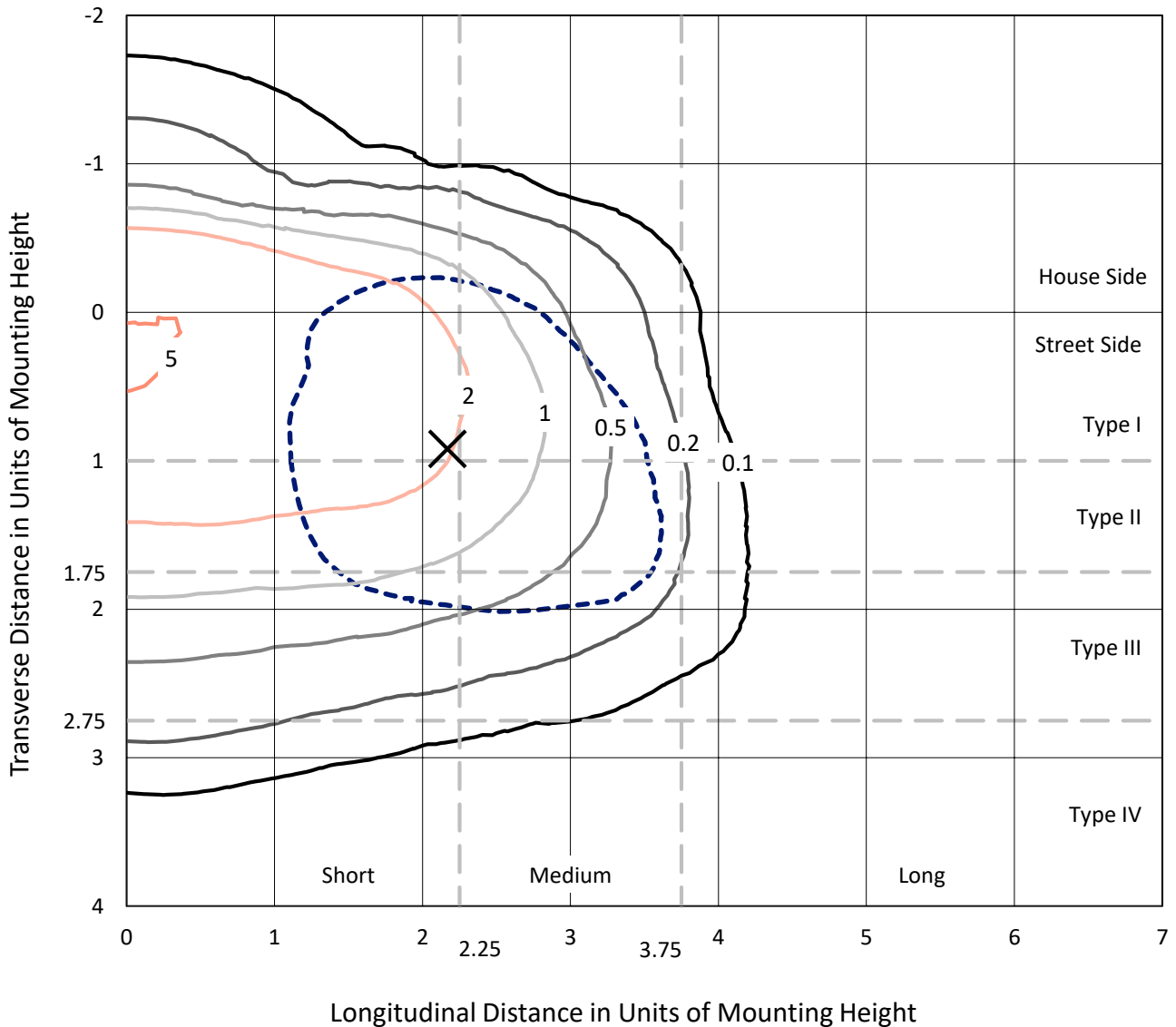
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

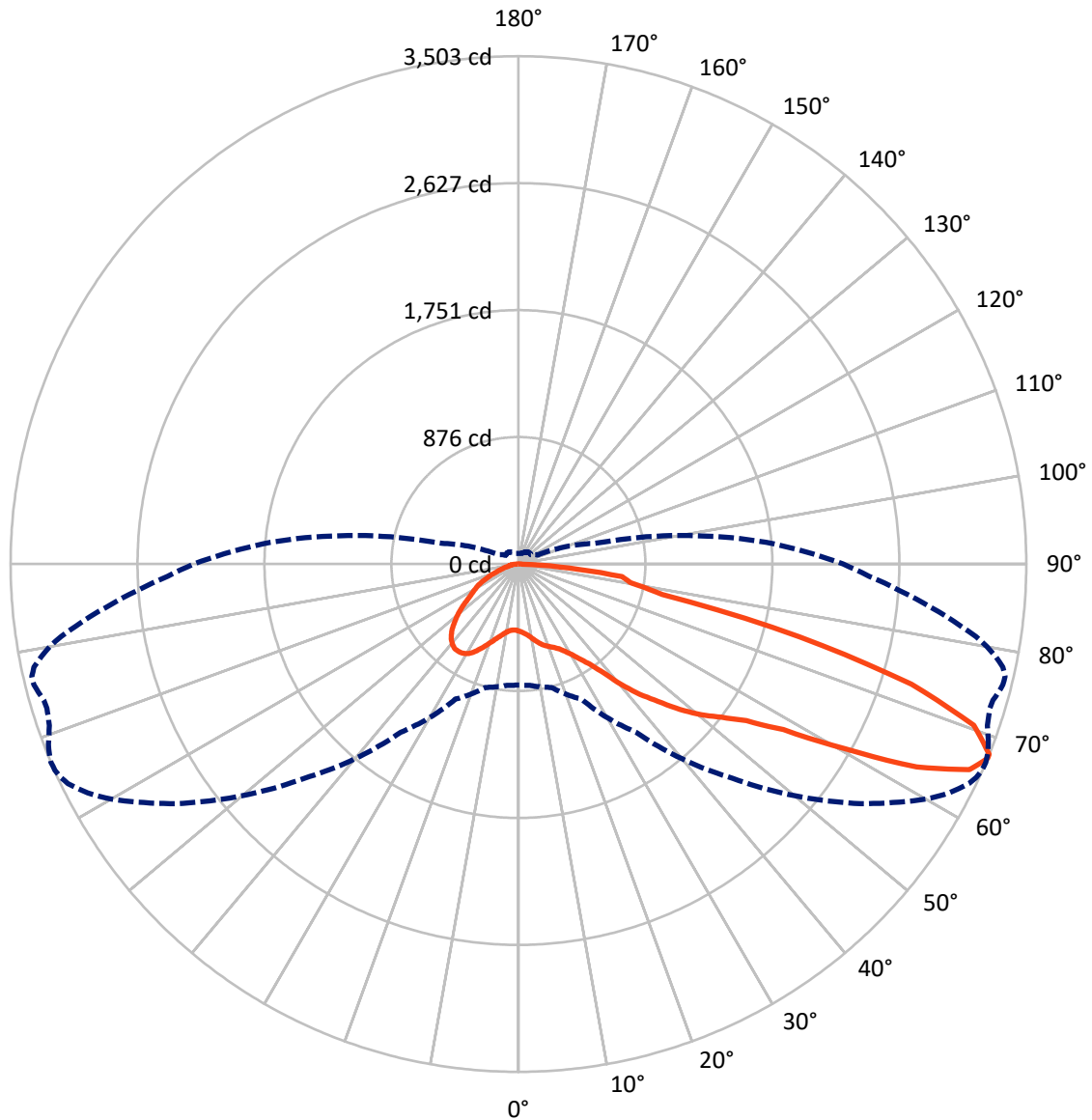
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	976.3	0.0	976.3
	% Fixture	23.1	0.0	23.1
Street Side	Lumens	3254.5	0.0	3254.5
	% Fixture	76.9	0.0	76.9
Total	Lumens	4230.8	0.0	4230.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	1.1
10°-20°	157.8	3.7
20°-30°	278.6	6.6
30°-40°	399.9	9.5
40°-50°	607.3	14.4
50°-60°	894.2	21.1
60°-70°	1188.4	28.1
70°-80°	581.4	13.7
80°-90°	77.2	1.8
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°	4230.8	100.0
0°-180°	4230.8	100.0



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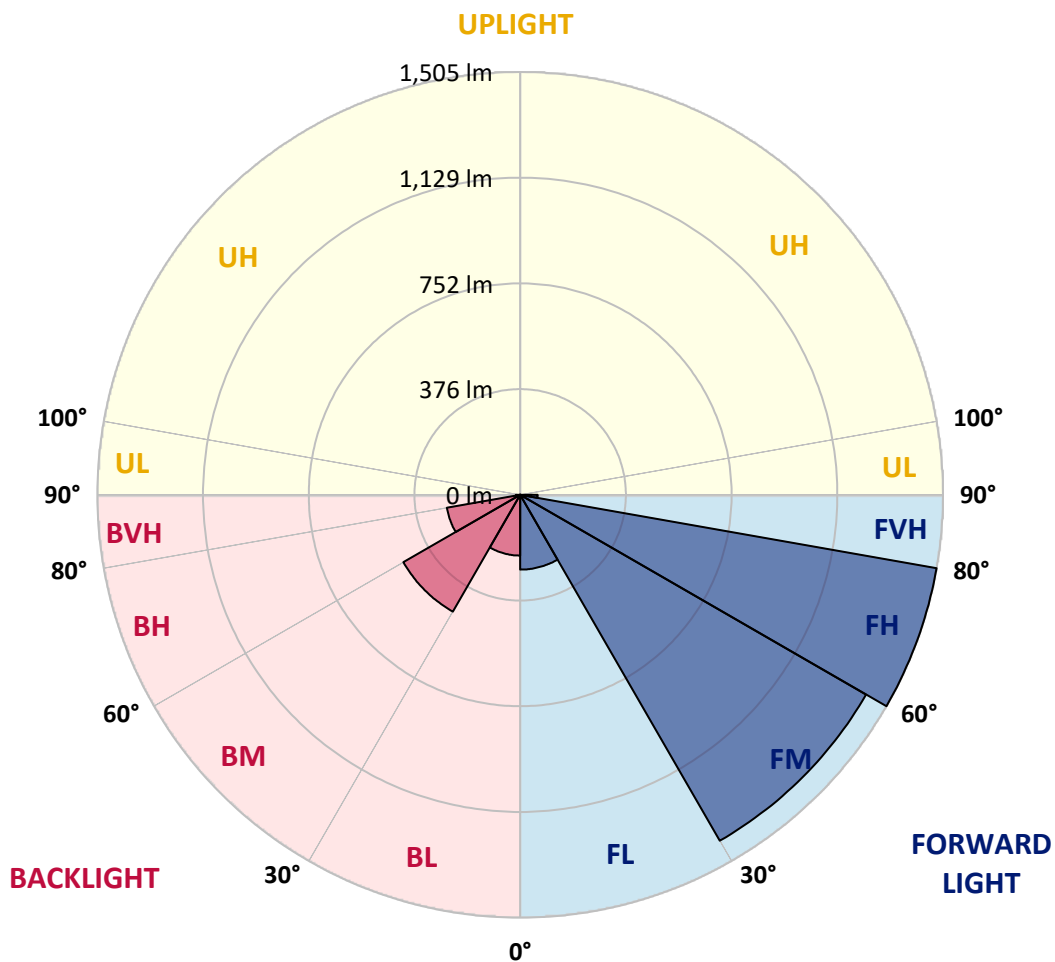
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	266.2	6.3			
FM	(30°-60°)	1421.5	33.6			
FH	(60°-80°)	1504.9	35.6			G1/1800
FVH	(80°-90°)	62.0	1.5			G1/100
BL	(0°-30°)	216.2	5.1	B1/500		
BM	(30°-60°)	480.0	11.3	B1/1000		
BH	(60°-80°)	264.9	6.3	B1/500		G1/500
BVH	(80°-90°)	15.2	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2
2.5°	484.0	484.5	483.5	483.1	480.3	477.5	475.6	473.3	473.3	473.3	472.4
5°	511.4	509.5	510.9	507.7	502.1	497.0	491.9	487.7	486.8	486.8	484.9
7.5°	544.4	542.1	541.1	536.5	528.1	520.7	510.5	506.3	504.0	503.0	502.1
10°	584.3	584.3	578.3	570.4	559.2	546.2	535.1	527.7	527.2	527.2	523.0
12.5°	625.2	626.1	618.2	610.3	592.2	575.0	562.0	553.7	553.2	551.4	549.0
15°	662.8	660.5	655.4	643.8	623.8	603.4	587.1	578.8	576.9	575.0	573.6
17.5°	693.9	691.6	685.1	670.3	649.4	625.2	605.2	596.4	595.5	594.5	592.7
20°	713.5	711.6	702.3	685.1	663.3	638.7	617.3	611.3	609.4	609.4	608.5
22.5°	724.6	721.8	708.3	685.6	664.2	646.1	628.5	624.7	623.3	623.8	623.8
25°	730.2	727.9	708.8	676.3	655.9	650.8	643.3	641.0	641.5	641.9	642.9
27.5°	731.1	727.9	705.6	664.2	645.2	659.6	664.7	668.4	668.4	670.3	673.5
30°	724.1	720.4	699.1	654.9	640.5	677.2	697.7	707.4	711.1	710.2	717.6
32.5°	712.1	709.7	692.6	654.9	653.5	712.1	748.3	762.2	764.1	765.0	773.4
35°	707.9	707.4	700.0	677.2	693.9	773.4	828.7	839.3	841.7	841.7	847.7
37.5°	707.0	709.3	717.6	719.0	765.0	864.4	936.9	953.1	953.1	957.8	957.8
40°	707.0	712.1	743.6	781.3	851.9	982.9	1083.2	1101.8	1101.8	1106.9	1104.1
42.5°	734.4	741.8	793.8	865.3	961.5	1105.0	1220.2	1241.1	1242.5	1241.1	1245.3
45°	788.2	794.7	857.9	960.6	1074.4	1236.0	1351.2	1376.3	1371.2	1374.4	1375.8
47.5°	859.8	870.0	942.0	1064.6	1184.5	1357.2	1498.0	1520.7	1518.9	1520.3	1514.2
50°	935.9	946.6	1027.0	1167.7	1294.1	1454.8	1616.0	1649.9	1646.6	1648.9	1652.2
52.5°	1003.3	1009.8	1087.4	1245.3	1377.2	1545.8	1706.5	1748.8	1756.2	1757.2	1759.5
55°	1043.2	1051.1	1122.2	1283.9	1437.6	1635.0	1810.1	1874.2	1888.6	1892.3	1902.6
57.5°	1057.2	1065.5	1130.1	1289.4	1470.6	1718.6	1954.6	2067.4	2079.5	2099.5	2132.0
60°	1056.7	1065.5	1121.7	1276.9	1504.0	1822.2	2179.4	2368.4	2429.7	2450.2	2496.6
62.5°	1013.5	1023.7	1080.9	1238.8	1546.8	1954.6	2513.8	2804.6	2883.6	2920.7	2970.9
65°	918.8	926.2	979.6	1142.2	1534.7	2085.1	2793.4	3156.2	3228.2	3282.6	3372.2
67°	834.7	839.3	881.1	1027.9	1416.7	2089.7	2881.7	3243.5	3306.2	3363.8	3456.3
67.5°	813.3	823.1	855.6	993.1	1372.6	2063.3	2875.7	3230.1	3294.2	3354.1	3451.6
70°	661.9	675.8	692.1	784.5	1079.0	1735.8	2662.5	2996.9	3053.1	3108.8	3244.9
72.5°	408.3	433.4	436.6	495.1	702.3	1199.8	2154.3	2527.3	2569.6	2609.5	2748.9
75°	240.6	244.3	255.9	303.3	412.0	717.2	1445.5	1877.5	1916.5	1936.0	2045.2
77.5°	134.2	138.0	147.7	188.6	316.8	483.1	841.7	1103.2	1126.9	1151.5	1133.8
80°	55.7	60.8	65.5	76.2	148.2	381.3	578.8	701.4	716.7	731.1	749.2
82.5°	26.9	28.8	35.3	40.4	53.9	156.5	453.8	608.0	626.1	647.0	689.3
85°	12.5	13.9	19.5	23.2	26.0	39.5	151.9	295.9	321.0	325.6	334.0
87.5°	0.9	0.9	2.3	3.3	4.6	5.1	15.8	22.3	25.1	22.8	28.8
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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CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2
2.5°	471.9	471.5	470.5	470.5	470.1	470.1	470.1	469.1	469.1	469.1	468.7
5°	484.5	484.0	482.6	482.6	481.7	481.7	480.3	479.8	478.9	478.9	478.4
7.5°	500.7	500.3	498.4	498.4	497.0	496.5	495.6	494.2	494.2	493.3	492.4
10°	523.0	521.6	521.2	518.8	519.3	518.4	517.4	516.0	515.1	514.2	513.3
12.5°	548.1	548.1	545.8	544.4	545.3	544.4	542.5	542.1	540.7	540.7	539.3
15°	571.8	571.8	570.9	569.0	569.5	568.1	567.6	566.7	564.8	565.3	564.8
17.5°	592.2	592.2	590.8	589.9	589.9	588.5	589.0	588.0	587.1	586.7	585.3
20°	608.5	608.5	607.6	606.6	607.1	607.1	605.7	605.7	605.7	604.8	604.8
22.5°	624.3	624.7	624.7	624.7	625.2	625.7	625.2	626.1	625.7	626.6	626.6
25°	645.2	646.6	647.5	647.5	649.8	650.3	650.8	652.1	652.1	653.5	654.0
27.5°	676.3	677.2	680.9	681.9	682.3	686.1	686.5	688.4	690.2	690.7	691.2
30°	719.0	721.4	724.1	726.0	726.0	730.6	732.5	731.6	736.7	738.1	739.9
32.5°	776.2	778.0	780.8	782.7	784.5	786.8	787.3	789.6	793.8	797.5	795.2
35°	848.2	852.8	848.2	853.3	854.7	857.9	857.0	859.8	861.6	863.0	862.6
37.5°	952.7	950.3	949.4	947.6	944.3	955.5	949.9	949.4	946.6	954.5	949.4
40°	1090.2	1091.6	1092.9	1085.5	1081.3	1081.3	1079.9	1074.8	1072.5	1079.5	1078.5
42.5°	1233.7	1235.1	1228.6	1223.9	1213.2	1211.9	1205.4	1204.0	1201.6	1205.4	1201.6
45°	1364.2	1365.1	1350.7	1353.1	1344.7	1346.1	1335.9	1340.1	1334.5	1338.2	1345.2
47.5°	1510.1	1511.9	1499.4	1504.5	1496.1	1491.0	1490.5	1493.3	1487.3	1491.0	1492.9
50°	1642.4	1640.1	1633.6	1635.0	1631.3	1632.2	1626.6	1631.8	1624.8	1632.2	1631.3
52.5°	1760.0	1757.2	1755.8	1760.4	1757.2	1757.2	1753.9	1756.2	1757.2	1768.3	1770.6
55°	1902.6	1904.9	1907.2	1915.6	1919.3	1913.2	1919.3	1930.9	1931.4	1957.8	1972.2
57.5°	2131.5	2147.8	2156.2	2161.3	2183.1	2180.8	2194.7	2222.6	2225.4	2286.7	2322.5
60°	2531.0	2559.8	2587.2	2572.3	2616.5	2629.9	2638.3	2690.3	2706.6	2764.6	2795.8
62.5°	3035.4	3038.7	3081.4	3068.0	3093.0	3087.0	3097.2	3120.9	3142.3	3190.1	3219.4
65°	3387.5	3402.9	3419.6	3402.4	3401.9	3381.5	3368.5	3368.0	3381.0	3391.2	3423.8
67°	3483.2	3498.5	3502.7	3490.2	3472.1	3446.1	3421.9	3409.4	3401.0	3405.6	3426.1
67.5°	3482.3	3496.7	3501.8	3489.7	3464.6	3442.8	3417.3	3402.9	3391.7	3394.0	3411.2
70°	3284.4	3315.5	3332.3	3336.0	3332.7	3294.6	3272.8	3259.8	3250.5	3227.7	3226.4
72.5°	2782.8	2820.4	2833.4	2854.3	2863.6	2807.4	2783.7	2798.1	2765.6	2693.6	2696.8
75°	2043.3	2046.1	2002.4	1994.1	1962.9	1835.7	1797.6	1762.7	1707.0	1620.1	1538.4
77.5°	1065.1	1064.6	1014.4	988.9	951.7	875.1	871.4	809.1	765.5	686.1	657.3
80°	756.7	768.7	785.5	793.8	780.8	751.1	710.2	666.1	615.4	565.7	506.3
82.5°	703.7	711.1	720.0	687.4	669.3	627.5	596.4	532.3	496.5	439.9	380.0
85°	342.3	365.1	347.4	327.0	320.0	250.4	242.0	202.1	183.5	151.0	140.7
87.5°	21.8	26.9	24.2	21.8	19.0	10.7	14.4	10.2	10.7	7.9	7.0
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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CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2
2.5°	468.7	468.2	467.7	467.3	466.8	466.8	466.3	465.9	465.4	464.5	464.5
5°	477.5	477.5	477.0	476.1	476.1	475.2	473.8	473.3	473.3	472.4	471.5
7.5°	491.9	491.4	490.5	490.0	489.1	488.2	487.3	486.3	485.9	484.5	484.0
10°	513.7	512.8	510.5	509.5	509.1	508.2	507.2	506.3	504.9	504.0	503.5
12.5°	538.3	537.9	536.0	537.0	534.6	533.7	532.8	530.4	531.4	529.5	528.6
15°	563.0	563.4	562.5	562.5	560.6	559.2	558.3	556.5	556.0	555.1	554.1
17.5°	584.8	585.7	584.3	583.4	582.5	581.5	579.7	577.8	577.8	576.0	575.0
20°	604.8	605.7	605.2	604.3	602.9	602.4	601.5	600.1	600.1	599.2	597.8
22.5°	627.5	628.0	628.0	627.5	626.1	626.6	625.7	624.3	624.7	622.9	622.9
25°	654.9	655.9	656.8	657.3	656.3	656.8	655.9	654.9	654.5	654.9	654.5
27.5°	692.6	693.5	696.3	693.9	696.3	696.7	695.3	693.5	694.9	697.2	695.8
30°	742.3	741.3	745.0	745.5	745.0	745.5	744.6	743.2	744.1	748.3	746.0
32.5°	798.0	799.9	800.8	801.7	803.1	805.0	803.6	802.2	804.5	803.1	806.4
35°	865.3	869.5	870.9	869.5	870.5	873.7	873.2	873.7	878.4	873.7	879.7
37.5°	950.3	954.5	957.8	955.9	958.2	958.2	962.0	972.2	965.7	974.0	980.5
40°	1073.9	1080.4	1080.9	1080.4	1082.7	1085.5	1089.2	1100.4	1092.9	1101.8	1107.8
42.5°	1201.2	1209.1	1211.9	1207.2	1212.3	1218.4	1218.8	1228.6	1229.0	1230.4	1233.7
45°	1344.7	1351.7	1357.2	1354.9	1355.4	1363.3	1361.4	1370.7	1363.7	1363.7	1365.6
47.5°	1497.5	1504.0	1507.7	1511.5	1506.8	1513.8	1517.0	1515.2	1506.8	1504.9	1493.8
50°	1636.9	1642.4	1648.0	1658.2	1657.8	1661.0	1663.3	1655.0	1653.1	1642.9	1630.4
52.5°	1784.6	1799.0	1811.5	1832.9	1836.1	1847.3	1843.1	1829.2	1826.8	1810.1	1793.4
55°	1990.3	2031.7	2049.8	2082.8	2105.1	2104.6	2095.3	2093.0	2075.3	2041.9	2021.9
57.5°	2348.5	2413.0	2444.1	2486.9	2493.8	2489.7	2477.6	2456.2	2425.6	2369.4	2333.1
60°	2865.4	2905.4	2941.6	2951.8	2956.9	2949.0	2906.8	2859.4	2799.5	2721.9	2657.3
62.5°	3256.1	3297.0	3323.9	3319.7	3287.7	3247.3	3185.5	3106.0	3022.0	2935.1	2838.5
65°	3454.9	3472.1	3467.9	3435.4	3380.6	3310.0	3219.8	3121.8	3022.9	2920.3	2819.9
67°	3444.2	3444.7	3416.3	3353.2	3283.0	3194.3	3084.2	2977.4	2861.3	2753.5	2634.1
67.5°	3425.2	3423.3	3383.8	3314.6	3238.9	3147.4	3033.1	2922.6	2802.3	2693.6	2570.0
70°	3209.6	3183.6	3094.4	2983.9	2878.4	2754.9	2635.1	2508.2	2372.6	2279.3	2137.1
72.5°	2637.4	2549.6	2395.8	2280.2	2167.3	2005.7	1930.9	1773.4	1678.2	1618.7	1511.5
75°	1527.2	1453.9	1334.9	1226.7	1171.9	1076.2	1030.7	915.0	890.9	890.0	852.8
77.5°	582.9	508.6	432.0	347.9	295.9	235.0	207.2	185.3	168.6	180.2	163.5
80°	437.1	359.5	281.0	204.4	145.8	107.8	92.4	85.5	81.3	78.0	75.7
82.5°	325.6	256.9	199.3	130.1	91.0	68.7	59.5	55.7	53.9	50.6	47.8
85°	110.1	88.3	69.7	48.3	38.1	31.1	28.8	27.9	26.5	24.2	22.8
87.5°	6.0	5.6	6.0	4.6	5.6	4.6	5.1	5.1	5.1	4.6	4.6
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-F02-LED-E1-SL3-8030

CANDELA DISTRIBUTION (continued):

	87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	155°
0°	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2
2.5°	464.0	464.0	464.0	463.1	461.7	458.9	456.1	453.8	451.5	450.1	449.2
5°	471.0	470.1	469.6	469.1	465.9	460.3	455.2	450.6	445.9	442.2	440.8
7.5°	483.5	481.7	481.2	479.8	475.6	467.3	459.8	452.4	445.9	440.8	438.5
10°	502.6	502.6	499.8	497.9	493.3	482.1	471.5	461.7	452.9	447.3	445.9
12.5°	526.7	526.7	524.4	523.0	517.4	503.0	490.0	478.4	470.1	464.5	464.0
15°	551.8	551.4	549.5	547.6	541.6	526.3	513.3	503.0	496.1	489.6	487.7
17.5°	574.1	574.1	571.8	569.9	563.9	550.9	539.3	531.8	523.9	510.5	500.3
20°	596.4	596.9	595.0	593.2	588.0	576.9	571.8	564.4	546.7	517.4	493.3
22.5°	621.0	622.9	620.6	618.7	614.5	609.9	608.0	590.4	553.2	506.3	471.0
25°	652.6	655.9	653.1	652.1	649.8	651.2	645.6	604.8	543.9	482.1	438.0
27.5°	695.8	695.8	696.3	696.3	695.3	700.5	680.0	605.2	523.5	451.0	398.5
30°	746.4	749.2	748.3	748.3	752.0	755.3	699.1	595.0	497.5	412.5	350.2
32.5°	807.3	809.6	810.5	806.4	821.2	804.5	706.0	576.4	465.4	364.6	292.6
35°	880.7	883.9	886.2	886.7	896.5	847.2	702.3	549.0	419.4	304.7	229.5
37.5°	976.4	982.9	988.0	990.3	990.8	883.5	692.1	512.8	359.5	237.8	170.9
40°	1103.6	1110.6	1109.2	1113.8	1087.4	904.8	668.9	460.3	285.2	174.6	131.9
42.5°	1226.3	1227.2	1229.0	1224.9	1171.0	916.0	636.4	396.2	213.7	130.5	112.9
45°	1363.3	1355.4	1346.6	1340.1	1248.1	920.2	591.8	318.2	151.0	109.6	104.5
47.5°	1491.9	1481.3	1463.1	1444.6	1316.8	913.7	534.6	238.3	114.7	100.3	98.9
50°	1618.3	1598.3	1572.8	1551.4	1382.8	903.9	471.5	171.9	100.3	95.7	94.3
52.5°	1774.8	1741.4	1707.9	1680.1	1468.7	888.6	405.0	130.5	94.3	92.0	90.1
55°	1989.4	1943.0	1889.1	1850.1	1585.3	865.3	335.4	110.5	91.5	89.6	86.9
57.5°	2286.7	2217.0	2156.2	2092.5	1744.6	841.7	275.4	102.7	91.0	88.3	84.5
60°	2590.5	2506.9	2429.3	2338.2	1907.2	818.0	233.6	101.7	92.4	88.3	82.7
62.5°	2748.4	2662.0	2568.6	2476.2	1977.3	762.2	204.8	103.1	95.7	89.6	82.7
65°	2712.2	2606.7	2512.0	2417.7	1896.0	656.8	173.3	105.0	102.2	95.2	84.1
67°	2530.1	2420.0	2329.0	2238.8	1714.9	550.0	148.6	106.8	109.2	101.7	86.9
67.5°	2466.0	2355.9	2266.2	2178.5	1661.5	527.7	142.6	107.8	110.5	103.6	87.8
70°	2044.7	1963.9	1868.6	1800.8	1345.2	390.6	117.1	109.6	118.9	114.3	92.0
72.5°	1471.5	1394.4	1322.9	1285.2	990.8	273.1	98.5	107.8	124.0	120.3	93.8
75°	782.2	777.6	751.5	770.1	613.1	178.4	86.9	100.8	118.4	110.1	87.3
77.5°	157.9	162.6	190.9	188.1	197.9	99.4	74.3	86.4	91.5	80.8	71.1
80°	73.4	72.0	70.6	71.5	70.1	63.6	60.4	67.8	63.6	52.0	47.4
82.5°	45.5	44.6	43.2	42.7	47.4	50.6	53.0	53.4	42.3	36.2	34.8
85°	21.8	21.8	21.4	22.3	27.9	41.3	44.6	39.5	28.3	26.0	24.6
87.5°	4.2	4.2	4.6	4.2	5.6	9.8	11.1	13.0	10.7	11.1	12.5
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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CANDELA DISTRIBUTION (continued):

	165°	175°	180°
0°	462.2	462.2	462.2
2.5°	448.2	447.3	447.3
5°	438.9	438.5	438.5
7.5°	436.6	437.1	436.6
10°	445.4	445.0	446.8
12.5°	465.0	466.3	465.9
15°	485.4	486.3	486.3
17.5°	491.4	488.2	487.7
20°	475.6	469.6	468.2
22.5°	445.9	434.8	435.2
25°	408.3	394.8	395.7
27.5°	364.6	350.2	349.8
30°	312.1	296.3	288.4
32.5°	249.0	229.9	229.9
35°	187.2	171.9	166.3
37.5°	142.1	133.3	130.5
40°	118.4	114.3	113.3
42.5°	107.8	106.4	105.9
45°	102.2	101.3	100.8
47.5°	97.1	96.6	96.1
50°	93.4	92.9	92.4
52.5°	90.1	89.2	88.7
55°	85.5	85.5	85.5
57.5°	82.7	82.7	82.2
60°	79.9	79.4	79.4
62.5°	77.6	76.6	77.1
65°	76.2	74.8	74.8
67°	75.2	72.5	72.5
67.5°	75.2	71.5	71.5
70°	73.9	67.8	66.9
72.5°	72.5	63.6	62.2
75°	68.7	60.4	59.0
77.5°	59.0	53.9	53.0
80°	45.5	39.5	40.4
82.5°	33.0	28.3	27.9
85°	23.7	20.4	20.4
87.5°	12.5	10.7	11.1
90°	0.0	0.0	0.0

(END OF REPORT)