

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: P162622

Luminaire Tested: **ECM-F04-LED-E1-SL4-HSS**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P162622
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F04-LED-E1-SL4-HSS
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6388.3 lumens
Efficiency: N/A
Efficacy: 62.5 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G2

Input Watts (W): 102.2
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

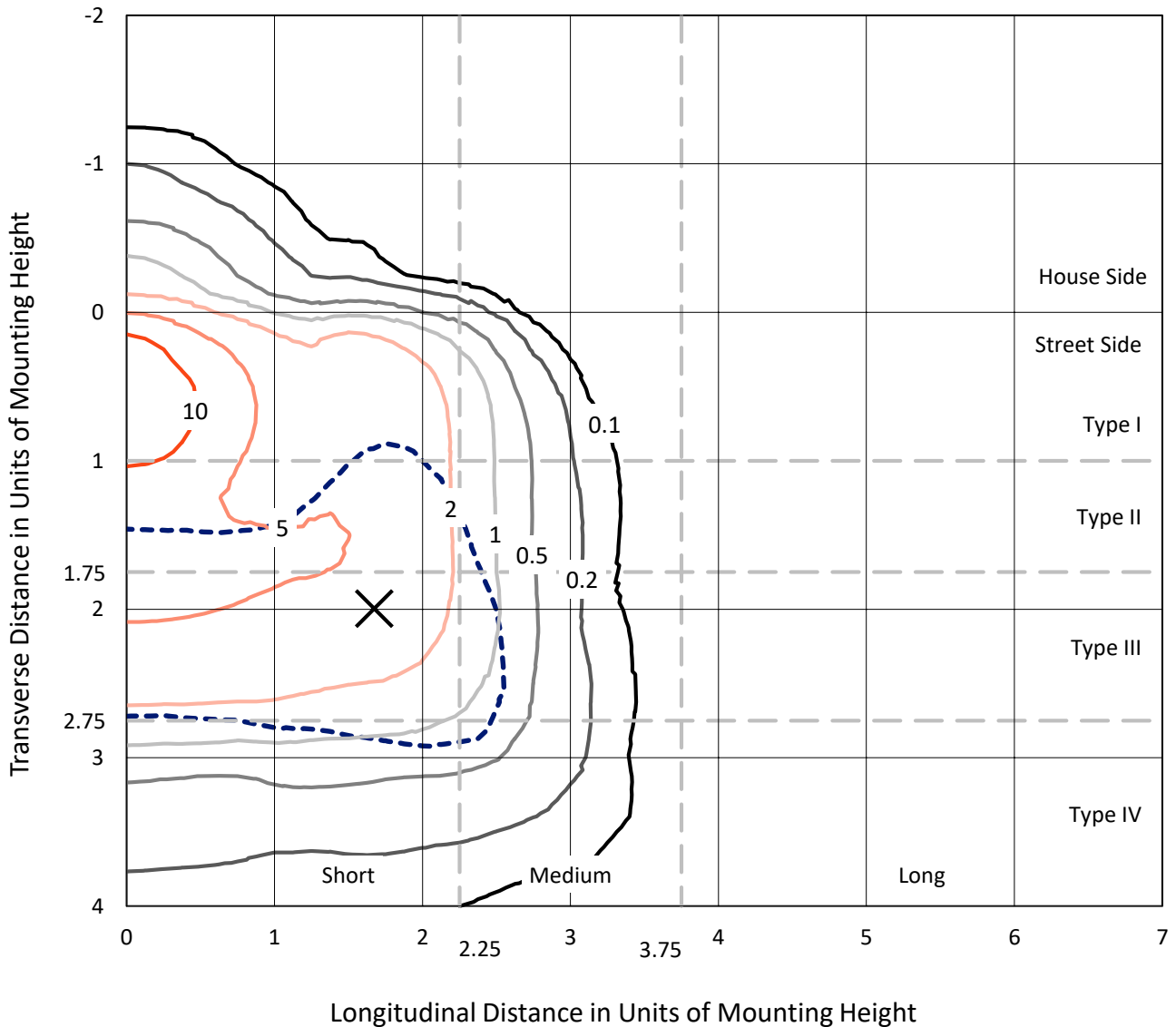


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

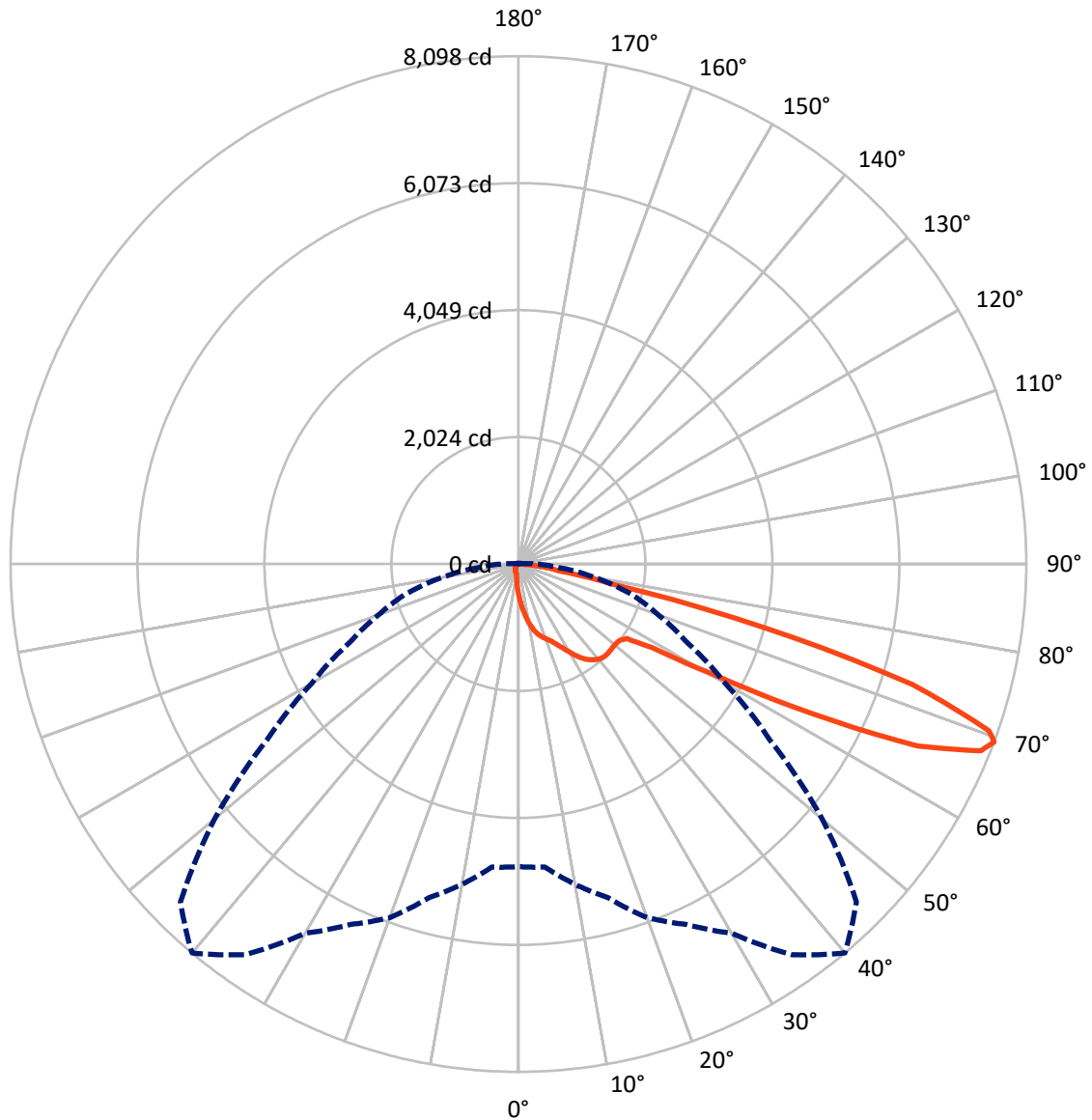


Based on 10 foot mounting height. Maximum calculated value = 14.3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	190.3	0.0	190.3
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	6198.1	0.0	6198.1
	% Fixture	97.0	0.0	97.0
Total	Lumens	6388.3	0.0	6388.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.6	0.8
10°-20°	171.0	2.7
20°-30°	327.2	5.1
30°-40°	544.2	8.5
40°-50°	736.4	11.5
50°-60°	1151.6	18.0
60°-70°	2367.6	37.1
70°-80°	952.7	14.9
80°-90°	88.2	1.4
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°	6388.3	100.0
0°-180°	6388.3	100.0



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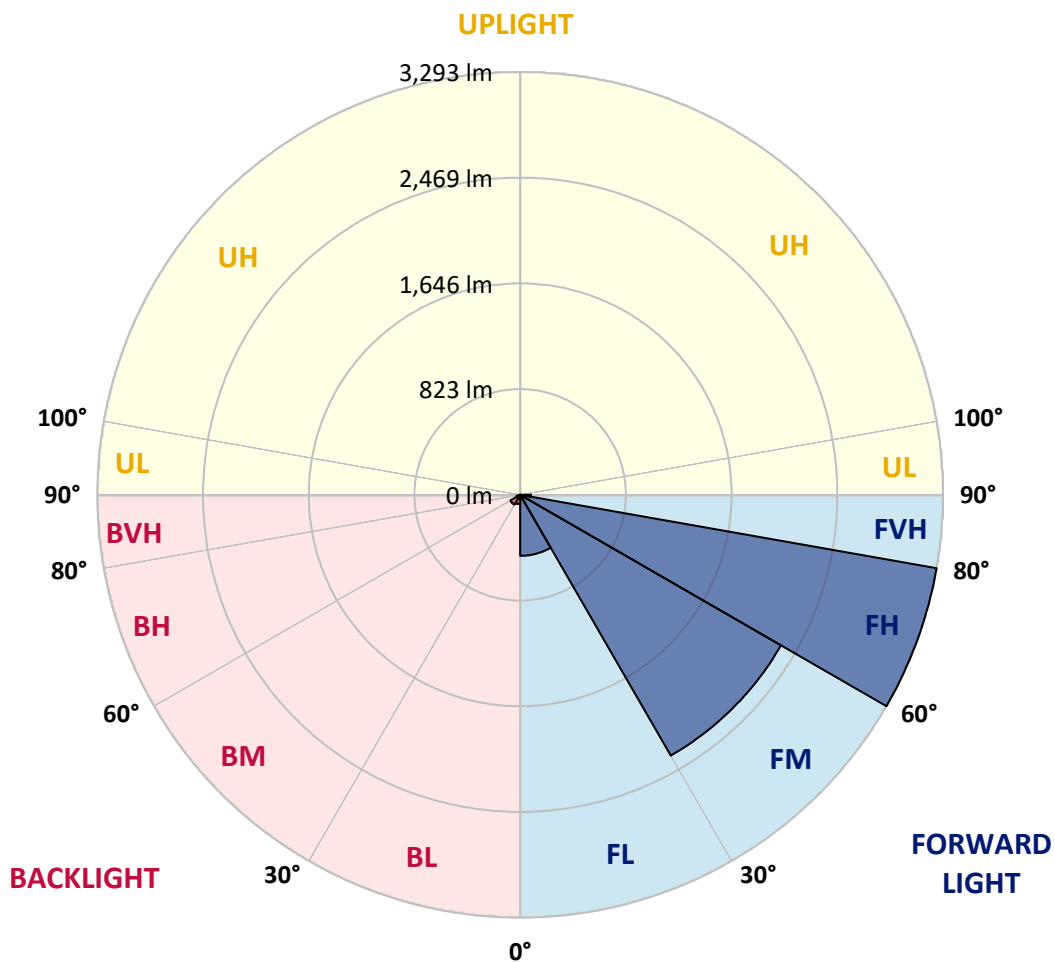
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	475.4	7.4			
FM (30°-60°)	2345.2	36.7			
FH (60°-80°)	3292.6	51.5			G2/5000
FVH (80°-90°)	84.9	1.3			G1/100
BL (0°-30°)	72.4	1.1	B0/110		
BM (30°-60°)	86.9	1.4	B0/220		
BH (60°-80°)	27.8	0.4	B0/110		G0/110
BVH (80°-90°)	3.3	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4
2.5°	643.6	636.3	627.9	627.9	617.4	617.4	611.1	594.4	592.3	582.9	573.5
5°	821.5	815.2	804.7	795.4	787.0	772.4	761.9	742.0	720.0	699.1	680.2
7.5°	995.3	992.1	973.2	970.2	956.5	932.4	911.5	882.2	844.6	815.2	780.7
10°	1156.4	1149.0	1144.8	1127.1	1107.2	1081.0	1048.6	1013.0	969.1	923.0	873.8
12.5°	1284.1	1279.9	1261.1	1253.7	1232.8	1206.6	1165.8	1119.7	1075.8	1016.2	958.6
15°	1379.3	1371.9	1359.4	1347.9	1322.8	1299.7	1262.1	1211.9	1158.5	1093.5	1024.5
17.5°	1458.9	1445.2	1442.0	1424.3	1398.1	1370.9	1329.1	1283.0	1220.2	1155.3	1080.0
20°	1565.5	1546.7	1540.4	1514.2	1484.0	1446.3	1398.1	1340.5	1274.6	1203.5	1126.0
22.5°	1691.1	1677.6	1663.9	1640.9	1602.2	1548.8	1478.7	1415.9	1332.2	1253.7	1169.9
25°	1869.1	1857.5	1835.5	1804.2	1756.1	1692.2	1607.5	1515.3	1416.9	1316.5	1218.1
27.5°	2041.7	2031.2	2015.6	1991.5	1937.1	1867.0	1762.3	1645.1	1520.6	1399.2	1290.4
30°	2203.9	2194.5	2178.8	2154.7	2106.6	2037.5	1919.3	1793.7	1638.8	1497.5	1366.7
32.5°	2378.7	2375.5	2357.8	2323.2	2281.4	2188.2	2059.5	1924.5	1767.5	1604.3	1451.5
35°	2576.5	2552.4	2535.7	2501.1	2430.0	2330.5	2179.8	2032.3	1867.0	1699.5	1529.0
37.5°	2743.9	2720.9	2700.0	2656.0	2569.1	2442.6	2272.0	2109.7	1939.2	1768.6	1594.9
40°	2866.3	2854.9	2829.8	2772.2	2674.8	2524.1	2340.0	2163.1	1991.5	1819.9	1648.2
42.5°	2957.4	2939.6	2911.4	2851.7	2736.6	2565.0	2367.2	2185.1	2015.6	1851.3	1682.8
45°	2990.9	2976.3	2950.1	2885.2	2760.7	2576.5	2366.2	2178.8	2016.6	1860.7	1705.8
47.5°	2971.0	2956.4	2933.4	2872.6	2750.2	2562.9	2347.4	2161.0	2006.1	1863.8	1726.8
50°	2905.1	2896.7	2878.9	2827.7	2717.7	2536.7	2330.5	2151.6	2004.0	1879.6	1756.1
52.5°	2898.8	2893.6	2871.6	2820.3	2708.4	2528.3	2328.4	2156.8	2021.9	1899.4	1777.0
55°	3542.4	3468.1	3301.7	3160.4	2928.1	2651.8	2434.2	2241.6	2097.2	1977.8	1892.1
57.5°	5034.7	4923.8	4705.1	4436.2	3902.4	3378.2	2958.5	2655.0	2505.3	2450.9	2483.4
60°	5733.8	5713.8	5679.4	5551.7	5278.5	4827.6	4325.2	3782.0	3564.4	3545.6	3611.5
62.5°	6065.5	6053.0	6063.4	6047.7	5962.9	5831.1	5686.7	5452.3	5236.7	5097.6	4802.4
65°	6218.3	6226.7	6286.3	6333.4	6343.9	6378.4	6484.1	6776.1	6989.6	6630.6	5811.3
67.5°	5830.1	5879.3	6016.3	6187.9	6388.9	6583.5	6897.5	7512.8	7951.3	7529.6	6365.9
69°	4826.5	4850.6	5185.4	5508.8	5999.6	6342.9	6798.0	7605.0	8097.8	7621.7	6321.9
70°	3799.8	3821.9	4180.8	4620.3	5450.2	5891.8	6487.3	7449.0	7960.7	7499.2	6095.9
72.5°	1714.1	1682.8	1809.4	2044.9	2946.9	3648.0	4689.4	6035.1	6567.9	6008.0	4560.6
75°	1197.2	1183.6	1197.2	1198.2	1338.5	1726.8	2178.8	3271.4	4045.7	3491.1	2178.8
77.5°	927.2	917.8	908.4	898.0	914.7	1024.5	1068.4	1160.6	1507.0	1425.3	830.9
80°	733.6	725.3	748.3	740.9	740.9	753.4	745.1	710.6	645.7	598.6	535.8
82.5°	341.1	343.2	343.2	372.6	449.0	524.3	548.4	513.8	456.2	388.2	312.9
85°	32.5	36.7	61.7	95.2	189.4	213.5	214.5	177.9	177.9	140.2	113.0
87.5°	0.0	1.1	1.1	1.1	9.5	26.2	22.0	6.3	3.2	3.2	5.3
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: ECM-F04-LED-E1-SL4-HSS

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4
2.5°	556.7	553.7	541.0	528.4	517.0	504.5	492.9	481.3	468.8	459.4	447.9
5°	651.0	627.9	601.8	576.7	551.6	525.4	498.2	474.1	449.0	426.0	404.0
7.5°	746.2	701.1	665.6	620.6	579.7	538.9	501.3	462.5	427.0	393.5	362.1
10°	826.7	772.4	716.9	659.3	600.7	546.3	494.0	447.9	400.8	360.0	321.3
12.5°	892.7	823.5	755.5	683.3	617.4	548.4	483.5	428.1	372.6	326.5	286.7
15°	952.3	872.7	791.2	707.4	623.8	545.2	473.0	404.0	347.5	295.1	250.1
17.5°	1000.4	909.4	817.3	723.2	633.1	541.0	459.4	387.2	321.3	266.8	222.9
20°	1042.4	947.0	847.6	742.0	639.4	540.0	447.9	366.3	298.3	240.7	197.8
22.5°	1081.0	985.8	879.0	766.1	648.9	538.9	437.4	350.6	278.4	220.8	177.9
25°	1125.0	1024.5	912.6	791.2	665.6	543.1	431.1	338.0	260.5	202.0	162.2
27.5°	1174.2	1068.4	952.3	822.6	687.5	551.6	429.1	324.4	244.9	184.1	149.7
30°	1243.2	1120.8	992.1	853.9	707.4	560.9	427.0	316.0	229.2	170.6	137.0
32.5°	1303.9	1172.1	1036.1	886.4	729.4	570.4	426.0	304.6	214.5	157.0	127.7
35°	1367.7	1219.1	1073.7	917.8	748.3	580.8	424.9	296.2	200.9	143.4	118.2
37.5°	1423.2	1259.0	1103.0	945.0	769.2	590.2	426.0	288.8	188.3	131.9	109.8
40°	1470.3	1299.7	1135.5	970.2	791.2	604.8	427.0	281.6	175.8	121.4	102.6
42.5°	1512.1	1338.5	1169.9	998.3	816.3	621.7	433.2	275.2	165.3	111.9	95.2
45°	1544.6	1374.0	1207.7	1038.2	857.1	648.9	444.8	271.0	154.9	103.6	88.9
47.5°	1578.1	1426.4	1271.5	1100.9	916.8	691.8	464.6	270.0	146.5	97.3	83.8
50°	1624.2	1478.7	1328.0	1164.8	971.1	735.7	488.7	271.0	136.0	91.0	78.5
52.5°	1657.7	1532.1	1401.3	1275.7	1100.9	869.7	581.8	289.9	130.8	85.9	72.2
55°	1855.4	1833.4	1836.6	1857.5	1722.6	1479.8	973.2	418.6	153.9	97.3	71.2
57.5°	2616.3	2693.7	2738.7	2737.7	2514.8	2085.7	1307.1	537.9	171.6	113.0	84.8
60°	3616.7	3558.1	3475.5	3271.4	2975.2	2380.8	1461.9	578.7	148.6	90.0	77.5
62.5°	4501.0	4157.8	3853.2	3522.6	3134.2	2483.4	1493.3	575.6	129.8	68.0	54.4
65°	5052.5	4435.1	3943.3	3528.8	3071.5	2397.5	1412.7	528.4	109.8	55.5	45.0
67.5°	5184.4	4285.5	3589.5	3061.0	2566.1	1865.9	1037.1	397.7	85.9	46.0	39.7
69°	4896.6	3809.3	2974.2	2374.5	1867.0	1238.0	641.5	251.2	65.9	41.8	36.7
70°	4504.2	3313.2	2422.6	1905.6	1382.5	869.7	449.0	176.9	53.4	38.7	33.5
72.5°	2897.8	1740.3	1191.0	828.8	570.4	346.4	175.8	79.6	40.8	32.5	27.2
75°	1123.9	643.6	466.7	354.8	277.4	192.5	106.8	51.3	34.6	27.2	20.9
77.5°	553.7	423.9	346.4	237.5	138.1	85.9	57.6	39.7	28.3	19.9	13.6
80°	437.4	290.9	173.7	107.8	81.7	61.7	43.9	32.5	20.9	12.5	9.5
82.5°	224.0	122.4	90.0	73.3	60.6	48.1	35.6	23.0	13.6	8.4	7.4
85°	70.1	51.3	46.0	45.0	41.8	34.6	25.1	14.6	8.4	5.3	5.3
87.5°	5.3	7.4	9.5	7.4	8.4	7.4	9.5	6.3	4.2	4.2	3.2
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4
2.5°	439.5	427.0	415.5	408.1	394.5	389.3	384.0	381.9	372.6	374.7	366.3
5°	384.0	362.1	345.4	328.6	312.9	301.4	292.0	280.5	271.0	266.8	258.4
7.5°	333.8	305.6	283.7	265.8	247.0	232.4	219.8	211.4	203.0	194.6	190.4
10°	289.9	259.5	234.4	216.6	198.8	186.2	176.9	170.6	165.3	162.2	161.1
12.5°	249.1	219.8	196.7	181.1	167.4	161.1	157.0	153.9	152.8	151.8	151.8
15°	217.7	188.3	170.6	159.1	152.8	149.7	148.6	146.5	144.4	143.4	143.4
17.5°	188.3	166.4	153.9	147.6	144.4	142.3	140.2	138.1	136.0	134.9	134.9
20°	168.5	150.7	144.4	140.2	137.0	134.9	131.9	129.8	128.7	127.7	126.6
22.5°	152.8	141.3	137.0	134.0	129.8	126.6	124.5	122.4	120.3	119.3	118.2
25°	141.3	134.0	130.8	126.6	122.4	119.3	116.1	113.0	111.0	109.8	107.8
27.5°	132.9	127.7	123.5	118.2	114.0	111.0	107.8	104.7	102.6	100.5	99.4
30°	125.6	120.3	115.1	111.0	105.7	102.6	98.4	95.2	94.2	92.1	90.0
32.5°	118.2	113.0	107.8	102.6	97.3	93.1	91.0	86.8	84.8	83.8	81.7
35°	109.8	104.7	98.4	94.2	88.9	84.8	81.7	78.5	76.4	74.3	73.3
37.5°	102.6	96.3	90.0	84.8	80.6	76.4	73.3	70.1	68.0	65.9	64.8
40°	94.2	87.9	81.7	76.4	72.2	69.1	65.9	62.7	60.6	59.7	59.7
42.5°	86.8	79.6	73.3	69.1	65.9	61.7	58.6	55.5	54.4	53.4	54.4
45°	79.6	72.2	66.9	62.7	59.7	55.5	52.3	50.2	49.2	50.2	51.3
47.5°	73.3	65.9	60.6	57.6	54.4	51.3	48.1	46.0	46.0	48.1	50.2
50°	66.9	59.7	55.5	53.4	50.2	47.1	42.9	41.8	42.9	45.0	47.1
52.5°	60.6	52.3	49.2	48.1	45.0	41.8	38.7	37.6	38.7	40.8	39.7
55°	54.4	46.0	45.0	43.9	40.8	36.7	33.5	33.5	33.5	32.5	30.4
57.5°	52.3	40.8	39.7	38.7	35.6	31.4	29.3	27.2	26.2	23.0	22.0
60°	54.4	36.7	36.7	34.6	31.4	27.2	24.1	20.9	18.8	16.7	16.7
62.5°	43.9	33.5	32.5	30.4	26.2	22.0	18.8	15.7	14.6	13.6	13.6
65°	35.6	30.4	28.3	25.1	22.0	17.8	14.6	12.5	11.6	11.6	12.5
67.5°	32.5	27.2	24.1	20.9	17.8	13.6	11.6	10.5	10.5	11.6	11.6
69°	30.4	25.1	22.0	18.8	15.7	12.5	10.5	10.5	10.5	10.5	11.6
70°	28.3	24.1	20.9	17.8	13.6	10.5	9.5	9.5	10.5	10.5	11.6
72.5°	22.0	18.8	17.8	14.6	10.5	9.5	8.4	9.5	9.5	10.5	10.5
75°	16.7	13.6	13.6	11.6	8.4	7.4	7.4	8.4	8.4	9.5	9.5
77.5°	11.6	9.5	9.5	8.4	7.4	6.3	6.3	7.4	8.4	8.4	9.5
80°	8.4	7.4	6.3	7.4	6.3	5.3	6.3	7.4	7.4	8.4	8.4
82.5°	6.3	6.3	6.3	6.3	5.3	5.3	6.3	6.3	7.4	8.4	8.4
85°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	6.3	6.3	7.4	7.4
87.5°	3.2	3.2	3.2	4.2	4.2	5.3	5.3	5.3	5.3	6.3	6.3
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: ECM-F04-LED-E1-SL4-HSS

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	482.4	482.4	482.4	482.4
2.5°	364.2	363.1	358.9	360.0
5°	255.4	249.1	253.3	252.2
7.5°	187.3	186.2	185.2	187.3
10°	160.2	160.2	159.1	160.2
12.5°	150.7	150.7	150.7	150.7
15°	143.4	143.4	142.3	142.3
17.5°	134.9	134.9	134.9	134.0
20°	126.6	125.6	125.6	125.6
22.5°	117.2	116.1	116.1	116.1
25°	107.8	106.8	106.8	106.8
27.5°	98.4	97.3	96.3	96.3
30°	88.9	87.9	86.8	86.8
32.5°	79.6	78.5	77.5	77.5
35°	71.2	71.2	70.1	69.1
37.5°	63.8	63.8	63.8	63.8
40°	58.6	59.7	59.7	59.7
42.5°	55.5	56.5	57.6	58.6
45°	53.4	55.5	56.5	56.5
47.5°	52.3	53.4	54.4	54.4
50°	48.1	47.1	47.1	47.1
52.5°	38.7	36.7	35.6	34.6
55°	28.3	27.2	25.1	25.1
57.5°	19.9	19.9	18.8	18.8
60°	15.7	15.7	14.6	15.7
62.5°	13.6	13.6	13.6	13.6
65°	12.5	12.5	12.5	12.5
67.5°	12.5	12.5	12.5	12.5
69°	11.6	11.6	11.6	11.6
70°	11.6	11.6	11.6	11.6
72.5°	10.5	10.5	10.5	10.5
75°	9.5	10.5	10.5	10.5
77.5°	9.5	9.5	9.5	9.5
80°	8.4	8.4	9.5	9.5
82.5°	8.4	8.4	8.4	8.4
85°	7.4	7.4	8.4	8.4
87.5°	6.3	6.3	7.4	7.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)