

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: P142034

Luminaire Tested: **ECM-F02-LED-E1-T4-7030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P142034
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33685)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F02-LED-E1-T4-7030
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (14) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4336.6 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

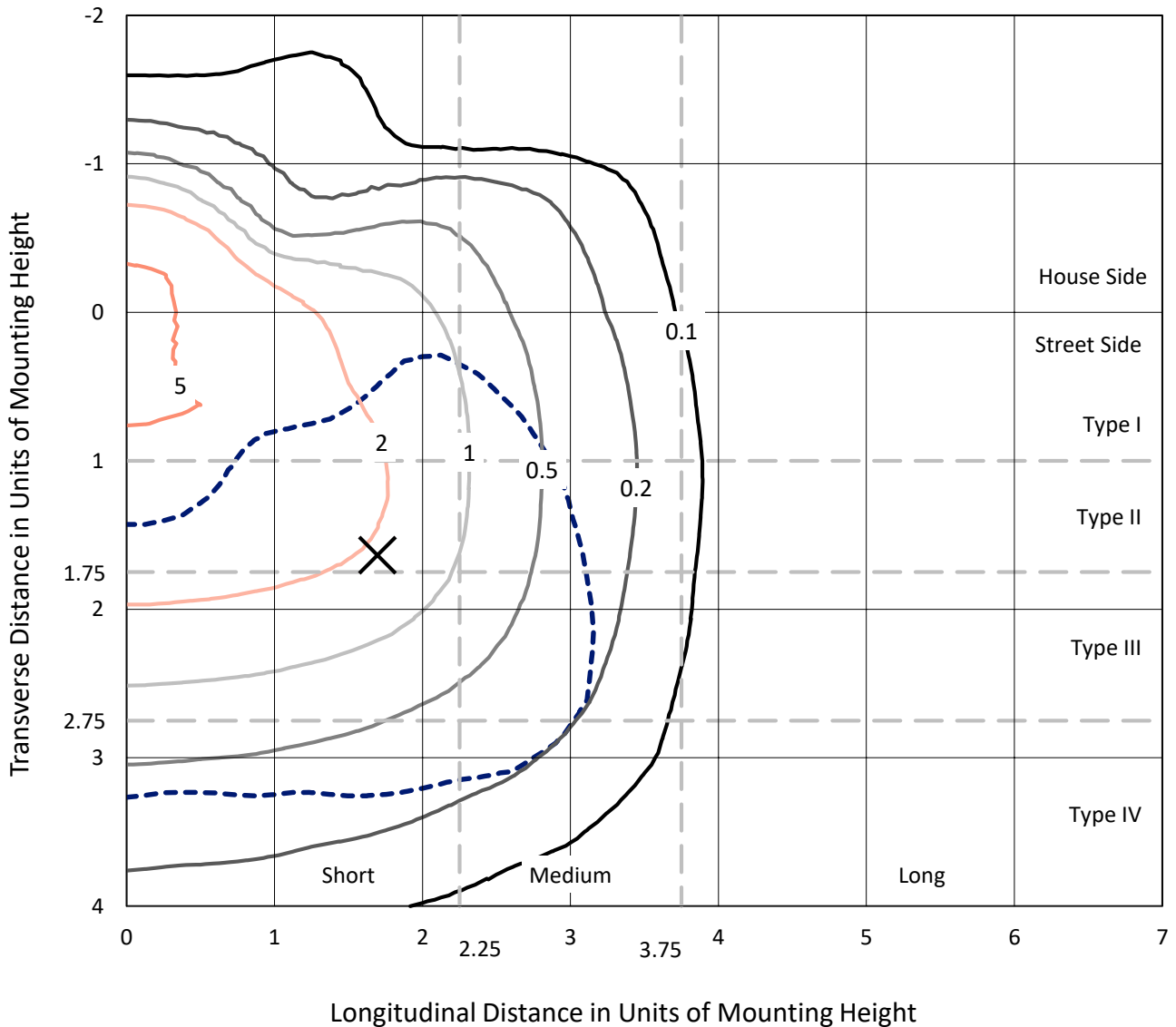
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

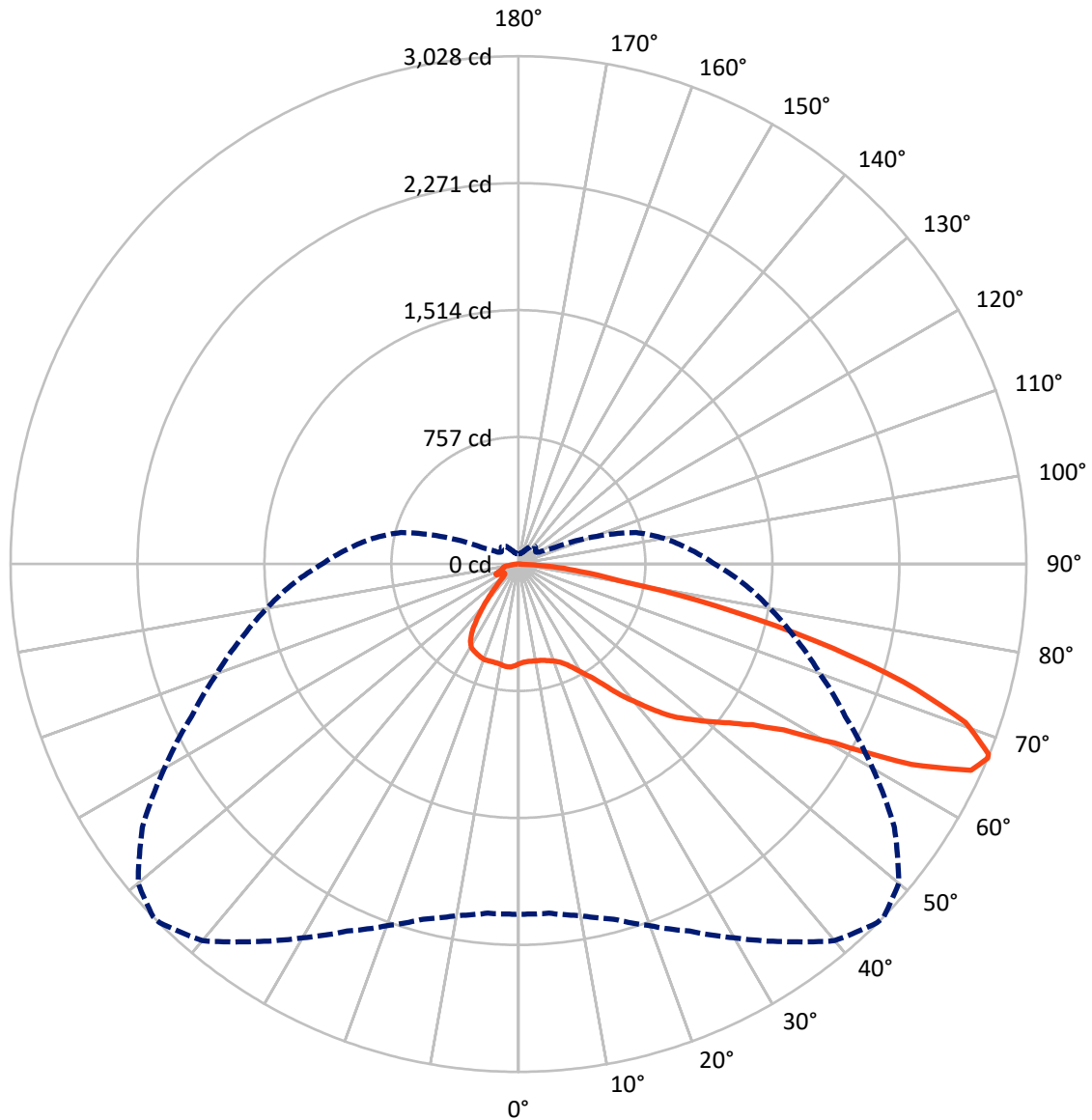


Based on 10 foot mounting height. Maximum calculated value = 6 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 46-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	861.8	0.0	861.8
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	3474.8	0.0	3474.8
	% Fixture	80.1	0.0	80.1
Total	Lumens	4336.6	0.0	4336.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.2	1.3
10°-20°	170.7	3.9
20°-30°	287.0	6.6
30°-40°	429.2	9.9
40°-50°	559.0	12.9
50°-60°	765.6	17.7
60°-70°	1210.3	27.9
70°-80°	750.8	17.3
80°-90°	107.0	2.5
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°	4336.6	100.0
0°-180°	4336.6	100.0

Coefficient of Utilization



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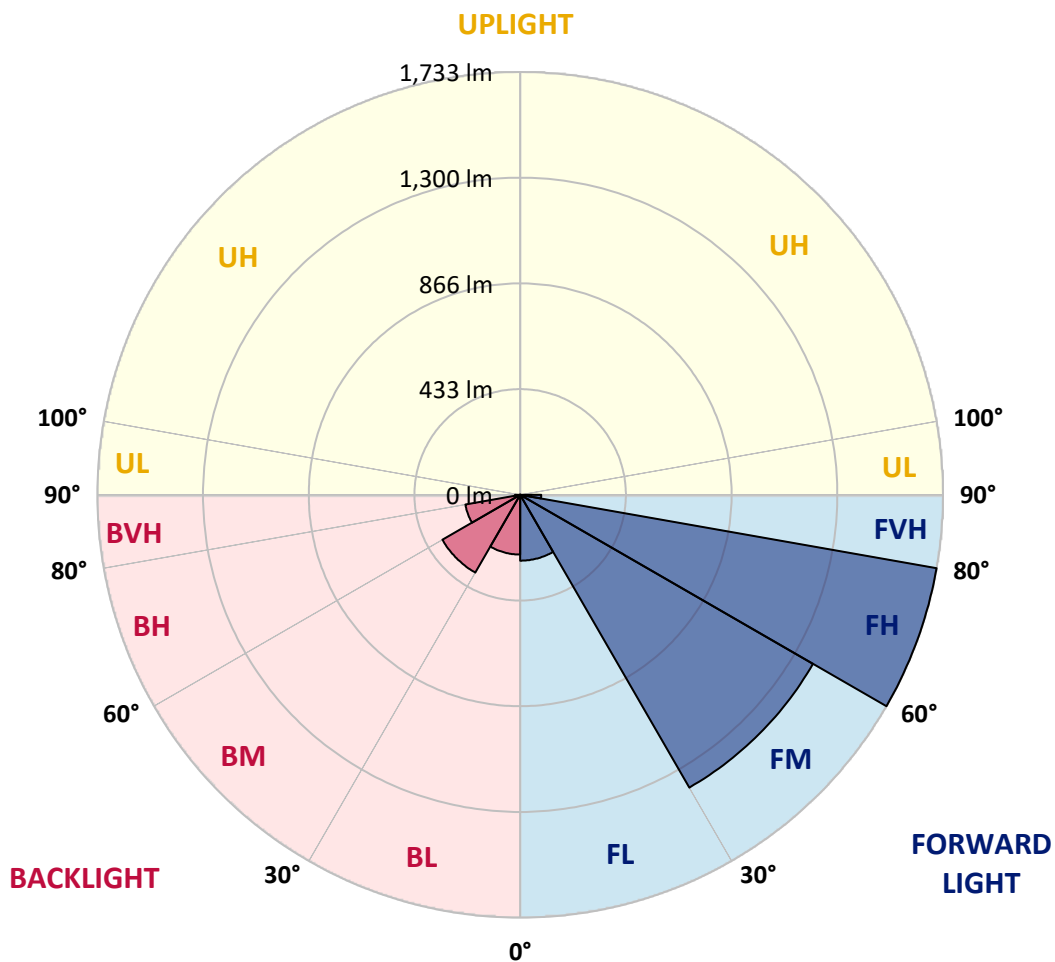
CATALOG NUMBER: ECM-F02-LED-E1-T4-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	270.0	6.2			
FM	(30°-60°)	1385.7	32.0			
FH	(60°-80°)	1732.9	40.0			G1/1800
FVH	(80°-90°)	86.2	2.0			G1/100
BL	(0°-30°)	244.8	5.6	B1/500		
BM	(30°-60°)	368.0	8.5	B1/1000		
BH	(60°-80°)	228.1	5.3	B1/500		G1/500
BVH	(80°-90°)	20.8	0.5			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	46°
0°	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1
2.5°	581.1	582.6	582.1	581.6	582.1	582.6	583.1	584.6	585.1	585.6	586.1
5°	570.5	572.0	571.5	572.5	573.0	575.0	576.6	579.1	580.6	582.6	583.6
7.5°	567.5	568.5	568.5	569.5	570.0	572.0	574.5	577.6	580.6	583.6	584.6
10°	575.5	576.1	576.1	575.5	576.1	577.1	578.1	580.6	583.1	585.6	586.6
12.5°	594.6	593.1	592.6	591.1	591.6	589.6	589.6	589.1	589.1	589.6	589.6
15°	614.8	613.8	612.7	610.2	610.2	607.2	606.2	604.2	599.2	597.2	596.7
17.5°	632.9	631.8	629.8	627.8	626.8	622.8	621.8	618.3	612.2	607.7	606.2
20°	654.5	652.0	647.4	646.4	643.9	639.4	637.9	633.4	625.3	618.8	618.3
22.5°	687.6	683.6	679.1	675.6	669.0	664.5	660.5	654.5	644.9	637.4	635.4
25°	720.8	719.3	715.3	710.3	705.7	700.7	695.7	686.6	674.1	664.5	662.5
27.5°	767.6	764.0	759.0	751.0	748.5	739.9	735.9	728.4	715.8	703.7	701.7
30°	816.3	812.8	804.8	797.7	796.2	787.2	784.7	776.6	765.6	753.5	752.0
32.5°	872.1	868.6	862.6	858.5	853.0	848.0	842.0	834.4	820.3	810.3	808.3
35°	943.5	940.5	933.4	936.5	931.4	929.9	926.4	913.8	898.3	886.2	888.2
37.5°	999.8	999.3	1000.8	999.3	1005.8	1012.4	1012.4	1013.4	1005.8	992.8	990.2
40°	1052.6	1052.1	1056.1	1060.6	1078.2	1088.8	1100.8	1105.4	1097.3	1087.3	1083.7
42.5°	1101.8	1100.8	1106.4	1122.9	1144.6	1164.2	1184.8	1202.4	1206.4	1195.3	1192.8
45°	1150.6	1152.1	1159.1	1177.7	1206.4	1232.0	1267.2	1287.8	1300.9	1294.9	1298.9
47.5°	1209.4	1210.9	1218.5	1240.6	1265.7	1297.9	1339.1	1374.3	1389.9	1389.9	1384.8
50°	1279.3	1286.3	1294.4	1309.4	1338.6	1370.3	1420.5	1455.7	1480.8	1479.8	1475.8
52.5°	1372.3	1373.8	1386.8	1398.9	1424.0	1456.2	1501.5	1549.7	1581.4	1578.4	1573.8
55°	1497.4	1491.4	1499.9	1511.5	1538.6	1566.8	1616.1	1671.9	1704.0	1694.5	1691.5
57.5°	1655.3	1650.2	1656.3	1670.3	1704.5	1727.7	1767.4	1818.6	1863.9	1871.9	1864.9
60°	1883.0	1883.0	1895.0	1925.2	1959.9	1994.6	2045.3	2107.2	2153.9	2165.5	2165.0
62.5°	2152.9	2170.0	2172.5	2211.7	2278.1	2337.9	2416.8	2525.9	2595.7	2645.5	2632.4
65°	2196.1	2201.7	2223.8	2284.6	2374.6	2480.6	2603.3	2746.5	2891.8	2963.7	2965.7
67°	2087.6	2089.6	2128.3	2192.1	2295.2	2414.8	2573.6	2748.1	2932.0	3025.0	3028.0
67.5°	2053.9	2049.9	2084.5	2151.4	2264.0	2398.7	2548.0	2731.5	2921.5	3021.0	3022.5
70°	1828.2	1830.2	1857.3	1931.7	2050.9	2177.0	2343.9	2532.4	2732.5	2823.5	2828.0
72.5°	1576.3	1563.3	1587.9	1667.3	1724.1	1847.3	2000.6	2142.8	2318.8	2404.7	2402.7
75°	1202.4	1166.2	1209.4	1255.7	1287.3	1409.5	1505.0	1603.0	1765.4	1830.7	1827.2
77.5°	647.9	646.4	693.7	729.9	777.1	887.2	971.1	1033.0	1169.7	1201.9	1205.9
80°	351.9	364.9	393.1	433.3	471.5	524.3	573.0	611.7	656.5	635.9	631.3
82.5°	212.1	233.7	277.0	307.6	322.7	346.3	381.0	403.1	420.7	382.5	375.0
85°	33.7	60.8	156.3	187.0	203.1	214.1	221.7	236.3	215.6	202.1	205.6
87.5°	11.1	12.6	24.1	53.3	46.7	32.2	42.2	61.3	29.2	15.6	15.1
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1
2.5°	586.6	587.1	588.6	590.6	591.6	594.1	594.1	596.2	596.2	597.7	599.2
5°	585.1	587.6	589.6	592.6	594.1	597.7	599.2	602.2	603.7	605.7	607.7
7.5°	587.6	591.1	593.6	597.2	599.7	603.2	604.7	607.2	608.7	611.2	612.2
10°	589.6	593.1	596.2	600.2	602.2	604.7	606.2	608.2	608.7	610.2	611.2
12.5°	592.1	593.6	596.2	599.7	601.7	603.2	604.7	606.2	607.7	607.7	607.7
15°	595.7	594.1	594.6	597.7	599.7	600.7	602.2	603.2	603.7	603.7	602.7
17.5°	603.2	599.2	596.7	596.7	597.7	598.7	598.7	597.2	596.2	594.6	592.6
20°	614.3	607.7	602.7	600.2	598.2	595.7	591.6	586.6	582.1	578.1	575.5
22.5°	629.8	623.3	617.3	611.7	605.2	596.7	588.1	577.6	569.0	562.5	560.0
25°	659.0	649.4	644.9	636.4	626.3	612.7	599.7	585.1	575.0	566.0	562.0
27.5°	698.2	690.7	680.6	676.1	663.0	647.4	632.9	615.3	601.2	590.1	582.6
30°	748.0	742.9	734.4	726.8	714.3	700.2	678.6	659.0	634.4	614.8	603.7
32.5°	805.3	797.7	790.2	780.6	771.6	753.0	732.9	703.2	669.0	635.4	614.8
35°	877.1	869.6	864.6	849.5	834.4	814.3	787.2	752.0	704.2	659.0	623.8
37.5°	976.2	960.1	935.5	913.8	886.7	856.0	825.4	783.1	729.9	671.1	622.8
40°	1062.1	1038.5	1010.9	973.7	935.5	895.2	859.0	813.3	751.0	681.1	615.8
42.5°	1173.7	1133.0	1086.3	1037.0	984.7	936.5	891.7	839.4	766.6	681.6	599.2
45°	1274.2	1224.0	1162.2	1095.3	1031.5	972.7	921.4	863.6	779.6	679.6	580.1
47.5°	1363.7	1304.9	1229.5	1149.1	1073.7	1007.3	951.0	890.2	796.7	686.1	573.0
50°	1450.2	1382.8	1297.9	1200.4	1116.4	1044.0	985.2	919.9	825.4	708.3	584.1
52.5°	1542.7	1460.7	1364.7	1254.6	1163.2	1088.3	1022.4	955.6	859.6	737.9	604.2
55°	1655.8	1562.8	1453.2	1331.6	1226.5	1143.1	1068.7	998.3	900.3	774.6	627.8
57.5°	1806.6	1712.6	1586.4	1446.2	1336.1	1237.1	1147.6	1068.2	962.1	825.4	663.0
60°	2097.1	1981.0	1813.1	1660.8	1541.7	1425.0	1317.0	1208.4	1080.7	927.9	753.5
62.5°	2563.6	2401.7	2193.6	1981.5	1820.6	1666.3	1523.6	1382.3	1223.0	1051.6	861.1
65°	2886.3	2686.2	2424.8	2158.9	1941.3	1752.8	1582.4	1414.5	1237.1	1073.7	907.8
67°	2960.2	2736.5	2438.9	2150.4	1913.6	1709.1	1523.6	1348.6	1170.2	1021.9	880.2
67.5°	2957.2	2734.0	2427.9	2132.3	1895.0	1693.5	1506.5	1322.5	1147.1	1001.8	866.6
70°	2778.2	2554.0	2246.4	1952.3	1723.6	1523.1	1334.6	1174.2	995.3	877.6	776.1
72.5°	2354.0	2158.9	1910.6	1646.2	1450.2	1270.7	1119.9	962.6	807.3	728.9	648.9
75°	1790.0	1617.1	1389.4	1195.8	1046.5	921.9	770.6	667.0	558.0	504.2	475.5
77.5°	1182.8	984.2	826.9	642.4	532.8	434.8	342.8	271.9	227.2	238.8	260.9
80°	625.8	496.6	367.4	284.5	219.7	170.9	135.7	101.5	73.9	86.5	108.6
82.5°	340.8	290.5	214.6	170.9	139.7	115.6	89.0	62.3	46.2	51.3	73.9
85°	194.5	170.9	132.7	103.5	90.5	73.9	50.8	34.2	33.2	35.7	45.7
87.5°	32.2	43.2	35.2	24.1	27.1	26.6	23.6	18.1	13.6	19.1	24.6
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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CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1	594.1
2.5°	600.2	601.7	603.7	604.2	603.7	605.2	607.7	609.7	608.2	607.2	609.7
5°	609.7	610.7	613.2	613.2	613.8	614.8	616.3	617.8	615.8	615.8	616.8
7.5°	613.8	613.8	616.3	615.3	615.3	614.8	616.3	616.8	613.8	613.2	613.8
10°	611.2	611.2	612.2	610.2	609.7	609.2	609.2	609.7	606.7	605.7	607.2
12.5°	607.7	607.7	606.7	605.7	604.7	603.7	604.7	605.2	603.2	603.2	603.7
15°	601.7	600.2	599.7	599.7	600.2	600.7	602.7	604.2	602.7	601.7	601.7
17.5°	591.6	590.6	592.1	595.2	598.7	601.2	604.2	605.2	601.7	597.7	594.6
20°	576.6	579.1	584.6	593.1	600.7	604.7	604.7	601.2	593.1	585.1	581.1
22.5°	561.0	568.0	580.1	593.1	602.2	603.7	598.2	590.6	579.6	571.0	563.5
25°	563.0	571.5	583.6	594.6	600.7	598.2	588.1	578.6	565.5	556.4	545.4
27.5°	584.1	592.1	598.2	601.7	599.7	591.6	580.1	567.0	552.4	539.9	526.8
30°	601.2	604.7	604.2	601.2	593.6	581.1	567.5	551.9	534.3	520.8	503.7
32.5°	604.2	597.7	587.6	576.6	566.5	552.4	536.8	518.7	499.1	481.6	464.5
35°	598.7	574.0	551.9	529.8	514.7	497.1	483.6	462.4	440.8	425.8	413.2
37.5°	578.1	535.3	500.1	469.0	446.9	426.8	406.2	385.5	367.4	360.4	356.9
40°	551.9	487.6	433.8	390.6	366.9	347.3	326.2	309.6	301.1	294.6	292.0
42.5°	513.7	433.3	366.4	320.2	290.0	271.9	251.3	242.3	238.3	239.8	237.8
45°	478.0	376.5	292.5	241.3	220.7	203.6	193.5	189.5	187.5	186.5	188.0
47.5°	452.9	332.8	235.7	183.5	166.4	154.3	150.3	148.8	148.3	146.3	145.8
50°	446.9	307.1	193.0	142.8	129.7	123.2	121.1	119.6	118.6	117.1	113.6
52.5°	453.9	300.1	171.9	122.6	111.6	106.6	105.1	102.5	101.5	97.5	93.0
55°	466.0	302.6	165.4	117.1	106.1	100.5	98.5	97.5	94.0	89.5	83.9
57.5°	491.1	318.2	168.4	118.6	107.1	102.0	101.0	100.0	95.5	89.0	81.9
60°	564.0	363.4	184.0	129.2	115.1	111.6	112.1	110.1	103.5	95.0	84.4
62.5°	676.6	433.8	212.6	142.3	128.2	128.2	131.2	129.7	119.6	105.6	90.5
65°	734.9	476.0	224.7	146.3	132.2	138.7	148.3	146.8	132.2	111.1	91.0
67°	725.8	468.0	217.7	140.2	124.7	133.2	142.8	143.3	127.2	106.1	87.0
67.5°	717.3	462.4	214.1	137.7	122.6	131.2	140.2	138.7	125.2	104.1	86.0
70°	644.4	406.2	191.0	128.7	113.6	116.1	118.6	116.6	106.1	92.0	79.4
72.5°	556.4	337.3	168.4	123.2	108.6	104.6	104.6	101.0	94.0	84.4	75.4
75°	424.2	262.4	147.8	117.1	102.5	96.5	95.5	93.0	87.0	79.9	71.9
77.5°	258.9	188.0	128.2	108.1	95.0	90.0	90.5	89.0	82.9	76.4	68.9
80°	129.7	121.6	107.6	94.0	86.0	80.9	81.4	78.4	73.4	68.4	62.3
82.5°	79.4	83.9	75.4	71.4	66.4	60.8	47.3	55.3	53.8	49.3	46.7
85°	52.8	52.3	47.3	41.7	38.2	33.2	29.7	30.2	33.2	34.2	34.2
87.5°	25.6	24.6	22.6	21.1	20.1	16.6	15.6	17.6	17.6	18.6	18.1
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-F02-LED-E1-T4-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	594.1	594.1	594.1	594.1	594.1
2.5°	610.2	611.2	610.7	612.2	610.7
5°	617.3	617.3	617.8	618.3	617.8
7.5°	613.8	613.2	614.3	615.3	614.8
10°	607.2	607.7	608.7	610.2	610.2
12.5°	604.7	605.2	607.2	608.7	608.7
15°	602.7	603.2	604.2	606.2	604.7
17.5°	593.6	591.6	591.6	593.1	591.6
20°	577.6	574.5	574.5	574.0	573.5
22.5°	558.5	550.9	548.9	546.4	546.9
25°	534.8	524.8	519.3	516.2	515.2
27.5°	515.7	504.2	498.6	494.1	492.6
30°	491.6	478.5	474.0	471.5	470.5
32.5°	456.4	444.9	438.8	437.3	434.3
35°	403.1	398.1	395.6	392.1	392.6
37.5°	349.9	348.3	342.3	344.3	342.3
40°	292.5	292.0	293.1	291.5	295.1
42.5°	238.8	237.3	239.8	238.3	239.8
45°	185.0	188.0	191.5	190.0	192.0
47.5°	141.8	142.3	141.2	142.3	143.3
50°	109.1	108.1	107.1	105.1	106.1
52.5°	90.0	86.5	83.9	82.4	81.9
55°	79.4	75.9	73.9	71.9	71.9
57.5°	76.4	71.9	68.9	67.4	66.9
60°	76.9	70.9	66.9	64.3	63.8
62.5°	78.9	70.9	65.3	62.8	61.8
65°	78.4	69.9	64.3	61.8	60.8
67°	75.9	68.4	63.8	61.3	60.8
67.5°	74.9	67.9	63.8	61.3	60.3
70°	71.4	66.4	62.8	60.3	59.3
72.5°	68.4	64.3	60.3	58.3	57.3
75°	65.3	61.3	57.8	55.8	55.3
77.5°	62.3	57.8	55.3	52.8	50.8
80°	56.8	51.8	48.3	44.2	43.2
82.5°	46.7	42.7	39.2	35.7	35.2
85°	34.7	33.2	30.2	27.1	27.1
87.5°	19.1	21.1	18.6	17.1	16.1
90°	0.0	0.0	0.0	0.0	0.0

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