

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: P141715

Luminaire Tested: **ECM-F02-LED-E1-T2**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141715
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33682)
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-T2
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 2
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4867.4 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

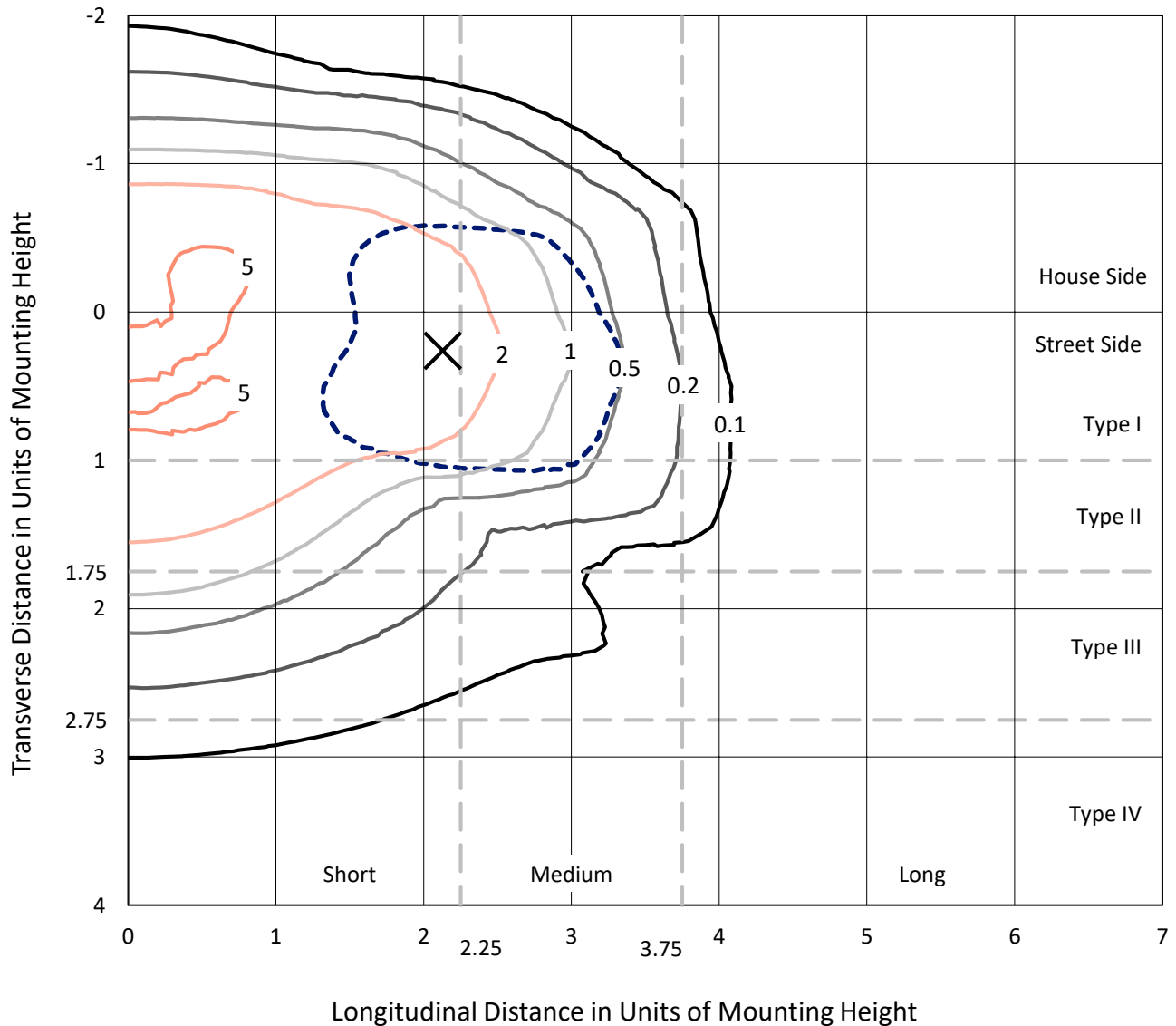
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

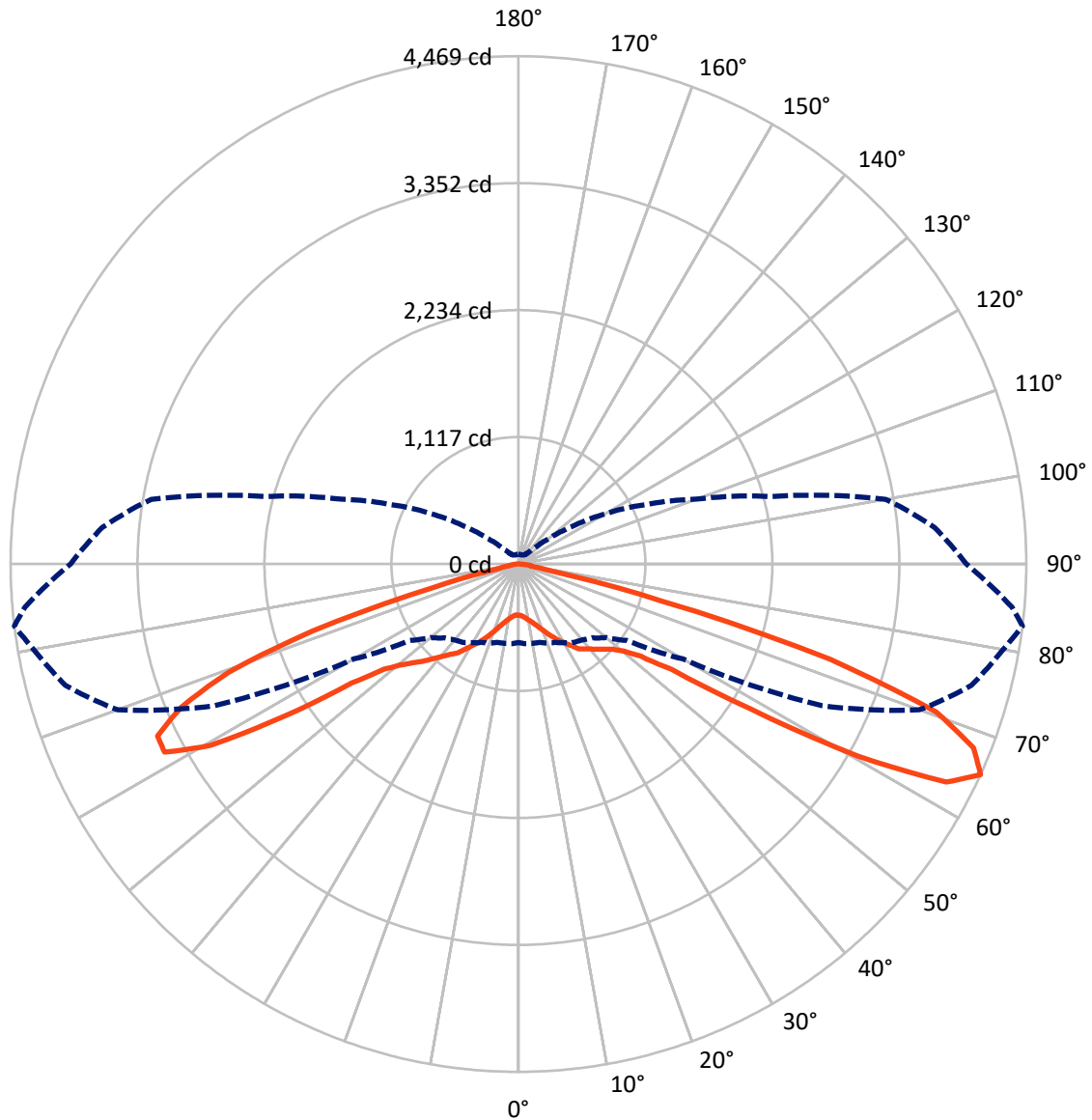
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.7 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 83-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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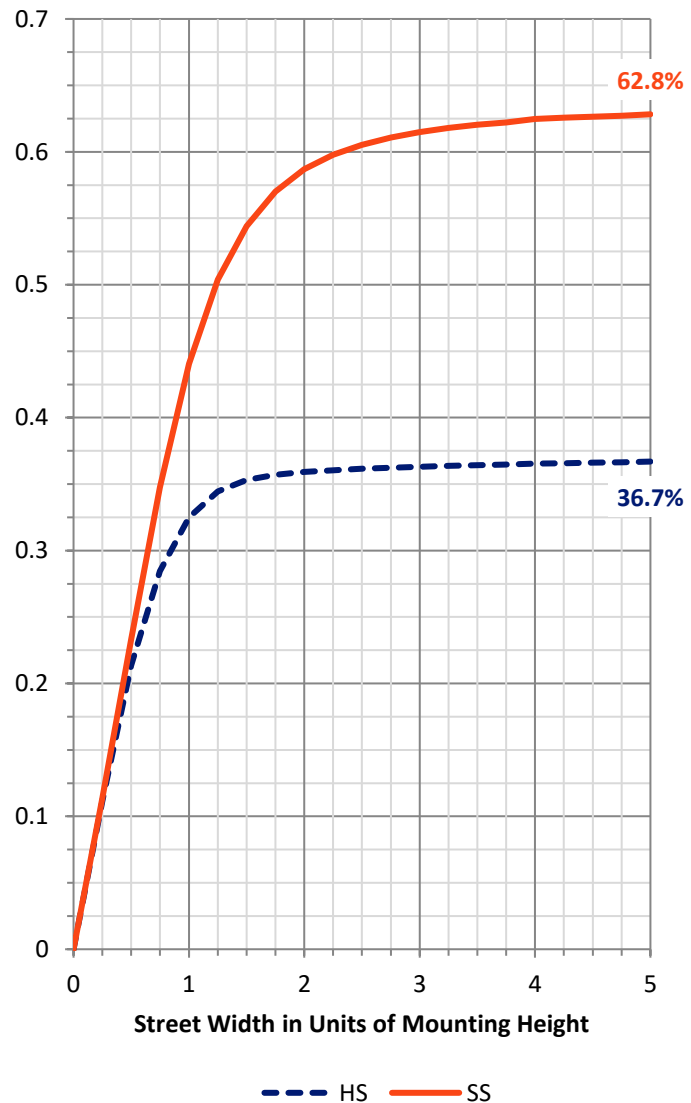
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1805.5	0.0	1805.5
	% Fixture	37.1	0.0	37.1
Street Side	Lumens	3062.0	0.0	3062.0
	% Fixture	62.9	0.0	62.9
Total	Lumens	4867.4	0.0	4867.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.3	0.9
10°-20°	158.9	3.3
20°-30°	313.9	6.4
30°-40°	540.2	11.1
40°-50°	814.9	16.7
50°-60°	1134.0	23.3
60°-70°	1309.0	26.9
70°-80°	475.7	9.8
80°-90°	75.5	1.6
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°	4867.4	100.0
0°-180°	4867.4	100.0

Coefficient of Utilization



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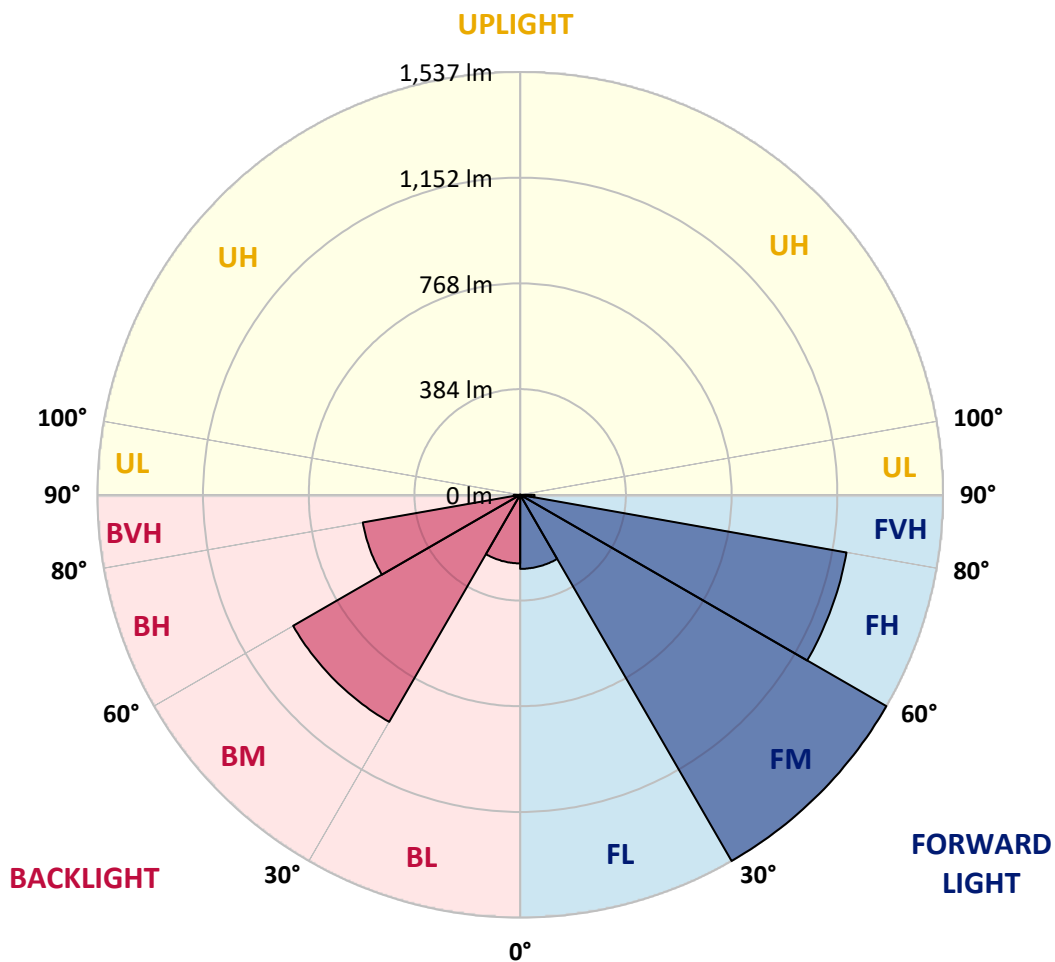
CATALOG NUMBER: ECM-F02-LED-E1-T2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	269.1	5.5			
FM	(30°-60°)	1536.5	31.6			
FH	(60°-80°)	1204.2	24.7			G1/1800
FVH	(80°-90°)	52.2	1.1			G1/100
BL	(0°-30°)	249.0	5.1	B1/500		
BM	(30°-60°)	952.6	19.6	B1/1000		
BH	(60°-80°)	580.5	11.9	B2/1000		G2/1000
BVH	(80°-90°)	23.4	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7
2.5°	472.8	473.9	472.8	472.8	472.2	471.6	471.6	471.1	470.0	468.9	468.3
5°	498.6	499.2	497.5	497.5	498.1	497.5	495.9	496.4	492.0	490.4	489.3
7.5°	527.2	528.9	526.7	525.6	525.0	523.9	522.3	519.5	516.2	513.5	511.8
10°	559.7	561.4	560.3	558.1	554.8	553.1	551.5	547.0	543.2	538.8	535.5
12.5°	598.2	598.8	597.7	593.3	591.1	586.1	580.6	575.7	570.2	563.6	558.1
15°	636.2	636.8	635.1	630.7	627.9	621.9	614.2	607.6	598.2	590.5	583.4
17.5°	665.4	666.5	663.2	659.9	656.0	648.3	641.2	633.5	623.5	615.3	608.1
20°	675.3	676.9	674.7	673.1	670.9	667.0	659.9	653.3	644.5	638.4	632.9
22.5°	670.9	672.5	671.4	671.4	671.4	670.9	667.6	665.9	660.4	657.7	656.6
25°	664.3	665.9	664.8	665.9	668.1	670.9	670.9	674.2	673.6	678.0	680.8
27.5°	681.3	682.4	679.7	679.7	681.9	686.3	685.2	691.8	692.9	701.7	710.0
30°	740.8	740.8	736.4	732.0	733.6	732.5	731.4	735.8	735.8	744.1	747.9
32.5°	829.4	823.3	822.8	822.2	818.4	821.1	812.3	812.9	809.0	810.1	808.5
35°	926.8	926.2	924.0	922.9	921.3	929.5	922.9	928.4	914.7	909.7	900.4
37.5°	1012.1	1014.3	1015.9	1024.2	1028.1	1044.6	1048.4	1051.2	1036.9	1037.4	1016.5
40°	1097.9	1100.7	1106.8	1121.6	1132.6	1148.0	1155.2	1166.7	1167.8	1170.0	1154.6
42.5°	1191.5	1187.1	1195.4	1214.1	1227.8	1243.2	1252.6	1274.1	1286.2	1292.2	1294.4
45°	1266.9	1262.0	1265.8	1276.8	1289.5	1309.3	1329.6	1361.6	1387.4	1415.5	1430.9
47.5°	1306.0	1307.1	1309.8	1316.4	1325.2	1344.5	1373.1	1413.8	1455.7	1500.8	1541.0
50°	1318.6	1319.2	1323.0	1329.6	1337.9	1358.3	1388.0	1434.2	1484.8	1548.1	1609.8
52.5°	1322.5	1320.3	1324.1	1327.4	1332.9	1350.0	1378.1	1426.5	1483.7	1560.2	1651.6
55°	1308.2	1305.4	1312.0	1316.4	1320.8	1334.6	1356.1	1400.6	1460.1	1547.0	1666.5
57.5°	1253.1	1253.7	1263.1	1274.6	1286.2	1304.9	1332.9	1375.3	1434.2	1520.1	1653.8
60°	1160.1	1158.5	1170.0	1184.4	1204.2	1233.9	1268.6	1311.5	1360.5	1432.0	1563.5
62.5°	991.2	997.8	1001.6	1023.1	1024.2	1066.6	1089.1	1132.1	1173.9	1228.9	1347.3
65°	690.1	704.4	708.3	713.8	739.7	761.7	798.0	843.1	870.7	919.1	1007.1
67.5°	429.8	440.3	440.8	455.1	477.7	503.0	531.1	576.8	618.6	626.3	670.3
70°	356.6	357.2	364.9	375.3	392.9	418.8	446.3	478.3	516.2	540.4	536.0
72.5°	295.5	298.8	304.3	314.8	334.1	357.2	392.4	433.1	480.5	528.9	571.8
75°	198.1	203.6	205.3	210.2	219.6	240.5	266.9	305.4	366.5	438.6	530.0
77.5°	105.1	106.2	110.1	113.9	118.9	131.5	148.6	168.4	208.6	270.8	378.1
80°	53.4	55.6	58.3	61.1	60.5	63.8	68.8	77.6	91.4	118.9	171.2
82.5°	19.3	24.8	32.5	36.3	36.3	37.4	39.1	40.7	39.6	44.0	55.0
85°	8.8	9.9	12.7	19.8	20.4	20.4	20.4	21.5	20.4	18.2	21.5
87.5°	0.0	1.7	1.7	5.0	5.5	5.0	5.5	7.2	5.5	4.4	3.9
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):

	55°	60°	65°	70°	75°	80°	83°	85°	90°	95°	100°
0°	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7
2.5°	465.6	464.5	461.7	460.6	457.3	455.1	454.0	452.9	451.3	449.1	447.4
5°	486.0	482.7	478.8	476.6	472.2	467.8	466.1	463.9	460.1	456.8	452.9
7.5°	507.4	503.6	499.2	494.2	489.8	484.9	482.7	480.5	475.0	470.5	465.0
10°	530.5	525.0	520.1	515.7	511.8	506.3	502.5	500.8	495.9	489.3	483.8
12.5°	552.6	546.5	541.5	536.0	532.2	527.8	523.9	522.3	518.4	512.4	508.0
15°	575.7	569.6	564.1	560.3	555.9	553.1	550.9	548.1	546.5	541.5	539.3
17.5°	600.4	594.9	590.0	586.7	585.0	584.5	583.9	582.8	581.2	577.9	576.2
20°	628.5	623.5	621.9	621.3	621.9	622.4	623.5	623.5	624.1	621.9	621.3
22.5°	655.5	655.5	658.2	661.5	664.8	667.0	668.7	666.5	667.0	670.3	673.1
25°	685.2	690.1	697.3	702.8	707.8	711.6	713.8	714.9	716.0	721.0	725.9
27.5°	717.1	724.8	735.3	742.4	751.8	757.8	762.2	761.7	763.3	769.9	778.7
30°	756.7	764.4	775.4	785.3	798.0	806.8	808.5	807.4	809.6	815.6	833.2
32.5°	812.3	814.0	821.1	831.0	844.8	853.6	855.2	858.0	862.9	874.0	895.4
35°	890.5	883.3	882.8	887.2	900.4	917.4	919.1	920.7	922.9	937.2	965.9
37.5°	996.1	967.0	949.4	935.6	937.2	943.3	946.6	947.7	953.2	975.2	1023.7
40°	1128.8	1074.3	1035.2	996.1	981.8	982.9	984.0	982.9	993.9	1028.1	1091.3
42.5°	1274.1	1226.2	1157.9	1077.0	1036.3	1023.1	1024.8	1025.9	1042.9	1092.4	1162.9
45°	1428.2	1397.3	1318.1	1191.5	1104.0	1070.4	1069.3	1071.5	1099.6	1169.5	1243.8
47.5°	1563.5	1571.2	1512.9	1364.3	1214.1	1128.8	1121.6	1125.5	1171.1	1246.0	1321.4
50°	1670.9	1721.5	1717.1	1599.3	1392.4	1229.5	1204.2	1209.7	1263.6	1341.2	1408.9
52.5°	1751.8	1854.7	1920.7	1873.9	1694.0	1412.2	1346.7	1337.4	1405.0	1487.0	1528.9
55°	1805.7	1972.5	2145.8	2226.7	2153.5	1806.8	1635.6	1615.3	1688.5	1793.0	1811.2
57.5°	1841.5	2115.5	2488.7	2801.3	2900.9	2603.7	2389.1	2303.8	2357.1	2467.8	2444.1
60°	1782.0	2172.2	2902.5	3462.8	3746.2	3672.5	3433.6	3304.9	3205.2	3197.0	3065.4
62.5°	1554.2	2037.4	3070.4	3777.6	4176.1	4268.0	4225.6	4073.1	3797.4	3644.4	3347.2
65°	1172.2	1669.2	2951.0	3753.4	4127.1	4330.7	4468.8	4359.3	3941.1	3676.3	3281.2
67.5°	749.0	1077.6	2454.6	3462.3	3813.4	4042.3	4318.6	4268.5	3734.1	3396.2	2966.4
70°	547.0	597.1	1665.4	2930.6	3317.0	3518.4	3898.1	3876.1	3274.6	2894.8	2468.9
72.5°	630.2	445.2	913.0	2189.3	2488.1	2646.6	2864.0	2810.6	2287.8	2024.2	1722.6
75°	710.5	498.1	514.6	1298.8	1390.2	1279.0	1308.7	1136.5	886.6	785.9	774.3
77.5°	598.2	624.6	466.7	558.1	514.0	370.4	277.4	217.4	170.1	182.7	203.1
80°	347.8	702.2	617.5	290.6	325.8	259.2	115.6	95.8	79.3	80.4	81.5
82.5°	107.3	438.6	869.0	355.0	322.5	365.4	106.2	64.9	52.3	58.9	66.6
85°	35.8	183.8	696.7	372.6	208.6	194.8	46.8	31.9	26.4	36.9	52.3
87.5°	8.8	44.6	129.3	49.0	30.8	18.7	16.0	11.6	12.7	23.1	32.5
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7	450.7
2.5°	446.3	444.7	443.0	441.9	440.3	440.3	438.6	438.6	436.4	435.3	435.3
5°	449.6	446.3	443.6	440.8	438.1	437.0	434.8	433.7	431.5	429.8	428.7
7.5°	460.6	456.2	452.9	449.6	446.3	444.7	442.5	440.3	439.7	438.6	437.5
10°	479.4	473.3	470.5	468.3	463.9	462.8	460.6	459.0	457.3	455.7	456.2
12.5°	503.6	499.2	498.1	493.7	492.6	490.9	487.6	486.5	482.1	478.8	477.2
15°	534.4	532.7	532.7	530.5	527.2	524.5	519.5	516.8	509.1	504.1	498.6
17.5°	575.1	573.5	574.0	571.8	568.0	563.0	557.5	549.2	537.7	528.9	517.9
20°	622.4	621.9	623.0	621.3	616.4	609.8	596.6	584.5	568.5	552.6	540.4
22.5°	675.3	678.0	679.1	674.7	669.2	655.5	641.2	623.5	602.1	581.2	564.1
25°	731.4	738.0	741.9	735.8	729.2	711.6	690.1	666.5	636.2	610.9	588.3
27.5°	786.5	800.2	805.7	802.4	792.0	767.2	738.6	707.2	670.3	636.8	607.6
30°	851.9	870.1	880.0	875.1	854.7	822.2	787.6	745.2	698.4	658.2	623.0
32.5°	920.7	943.3	950.5	940.0	910.3	869.6	824.4	772.7	719.9	673.6	634.0
35°	997.2	1018.1	1019.8	999.4	960.4	908.6	852.5	790.3	729.8	678.0	634.6
37.5°	1063.8	1084.7	1083.1	1052.8	1005.5	941.1	869.6	794.2	723.7	664.8	617.5
40°	1133.7	1156.8	1144.2	1105.1	1044.0	962.0	871.8	780.9	700.6	636.2	584.5
42.5°	1207.5	1217.4	1194.8	1145.8	1067.1	961.5	853.0	749.6	664.3	592.7	538.2
45°	1275.2	1267.5	1235.0	1169.5	1065.5	937.8	816.2	710.5	615.8	544.3	490.9
47.5°	1335.7	1311.5	1261.4	1169.5	1039.6	896.0	768.8	659.9	565.8	493.7	440.8
50°	1401.2	1350.6	1272.4	1149.1	992.8	845.3	718.8	609.2	512.4	438.6	380.8
52.5°	1488.1	1397.3	1272.4	1112.3	944.4	794.2	665.9	550.3	450.2	373.1	315.9
55°	1691.8	1495.3	1294.4	1091.9	901.5	740.2	603.2	474.4	377.0	303.2	255.9
57.5°	2091.9	1709.9	1405.0	1129.3	885.5	681.9	522.3	390.2	297.7	236.1	196.5
60°	2424.8	1883.3	1494.8	1157.9	859.6	606.5	423.2	298.8	221.2	174.5	148.6
62.5°	2510.7	1885.5	1457.9	1083.6	755.1	493.7	312.0	205.8	151.9	126.6	112.8
65°	2296.1	1667.6	1239.9	883.9	575.1	342.9	195.4	124.9	101.3	92.5	87.0
67.5°	1930.1	1328.5	919.1	616.4	362.7	188.8	109.5	85.9	77.0	74.3	71.5
70°	1480.4	933.4	598.2	361.0	189.9	98.0	78.1	70.4	66.6	64.9	62.7
72.5°	912.5	551.5	325.3	173.4	94.7	74.8	69.9	67.1	62.2	60.0	57.8
75°	387.4	236.7	134.8	88.1	75.9	71.5	67.7	64.4	60.5	57.2	55.0
77.5°	130.4	90.3	79.8	77.0	75.9	71.5	66.6	62.2	58.3	54.5	52.3
80°	79.3	72.1	73.7	73.2	75.9	71.0	64.4	59.4	55.0	51.2	48.4
82.5°	68.8	68.2	69.9	71.5	75.4	68.2	60.5	53.4	47.9	44.0	41.3
85°	59.4	60.5	61.6	62.7	64.9	57.8	49.0	42.4	38.0	33.0	30.8
87.5°	39.6	42.9	45.1	45.7	44.0	27.5	16.0	18.7	19.3	16.5	14.9
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-T2

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	450.7	450.7	450.7	450.7	450.7
2.5°	433.7	433.1	434.8	433.1	433.1
5°	428.2	427.6	427.6	427.6	426.5
7.5°	437.0	436.4	435.9	435.9	435.3
10°	454.0	453.5	453.5	452.9	452.9
12.5°	474.4	472.2	471.6	470.5	471.1
15°	494.2	488.2	486.5	484.9	483.2
17.5°	509.6	502.5	498.6	495.3	495.3
20°	528.9	519.5	514.6	509.6	509.6
22.5°	550.9	538.2	531.6	526.1	523.9
25°	569.1	553.1	543.7	537.1	535.5
27.5°	582.8	562.5	550.3	542.6	540.4
30°	593.8	570.7	556.4	548.1	544.8
32.5°	601.0	575.7	560.3	552.0	548.7
35°	597.1	570.2	551.5	541.5	539.3
37.5°	577.9	549.2	527.2	516.8	512.9
40°	542.6	511.8	488.7	476.1	473.9
42.5°	496.4	465.6	443.6	430.4	424.3
45°	446.9	415.0	394.1	381.9	374.8
47.5°	393.5	362.1	340.7	328.6	323.6
50°	337.4	307.1	288.9	275.7	270.8
52.5°	279.0	252.1	233.9	222.9	217.4
55°	223.4	201.4	186.0	178.9	175.0
57.5°	174.5	160.2	151.3	146.9	144.2
60°	135.4	128.2	124.9	121.6	122.2
62.5°	105.7	104.0	102.9	101.3	101.8
65°	85.3	84.2	84.8	84.2	84.8
67.5°	69.9	70.4	71.5	71.5	72.1
70°	61.6	62.2	63.3	63.3	63.3
72.5°	57.2	58.3	59.4	58.9	58.9
75°	53.9	56.7	58.9	56.7	54.5
77.5°	50.6	57.2	63.3	58.3	52.3
80°	46.2	60.5	67.7	58.9	50.1
82.5°	44.0	58.3	59.4	51.2	44.0
85°	40.7	66.0	68.8	46.8	33.6
87.5°	20.9	39.6	45.7	31.4	17.1
90°	0.0	0.0	0.0	0.0	0.0

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