

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: P162462

Luminaire Tested: **ECM-F04-LED-E1-SL3-HSS**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P162462
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
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-SL3-HSS
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 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: 5443.4 lumens
Efficiency: N/A
Efficacy: 53.3 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-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

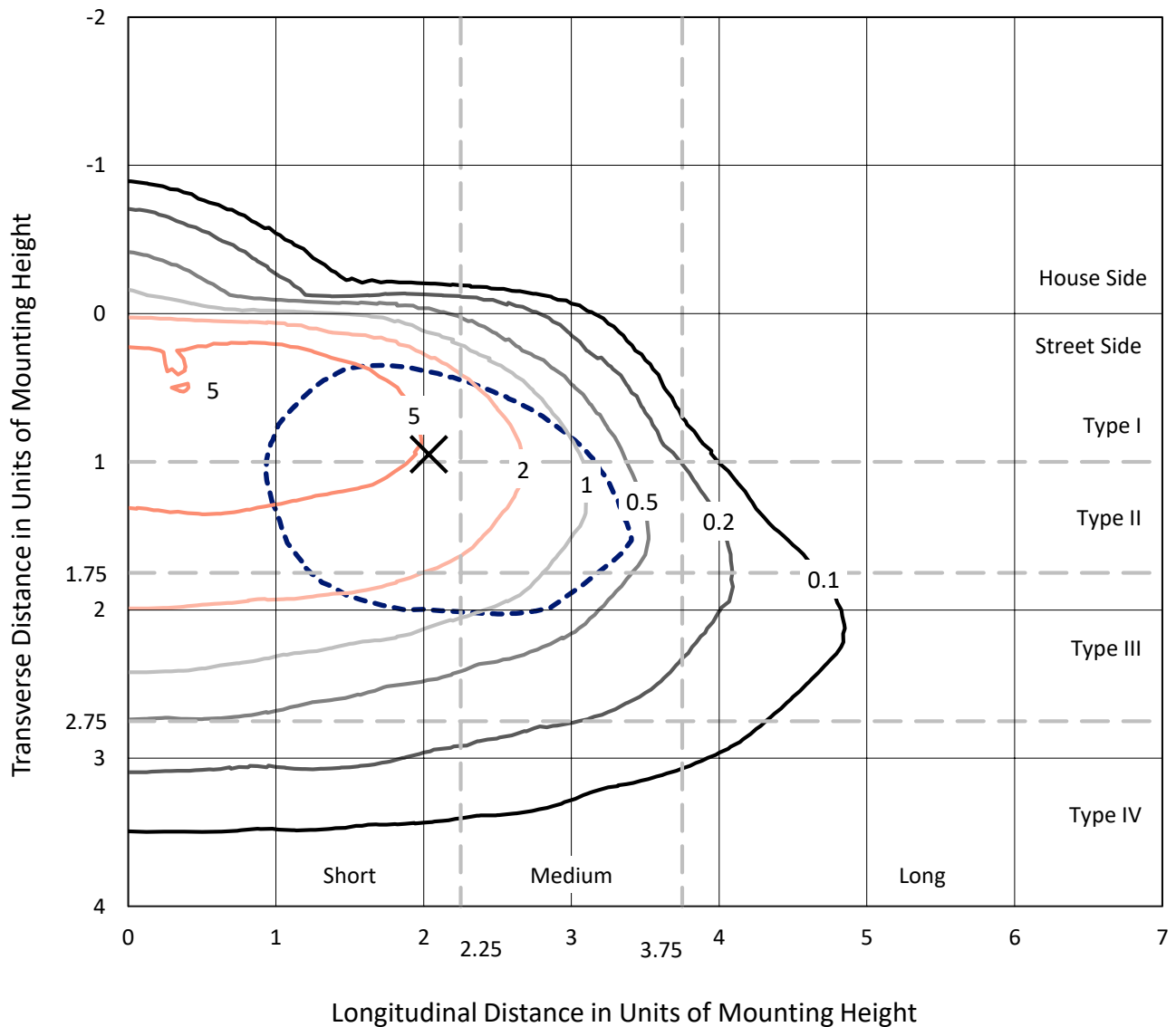


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

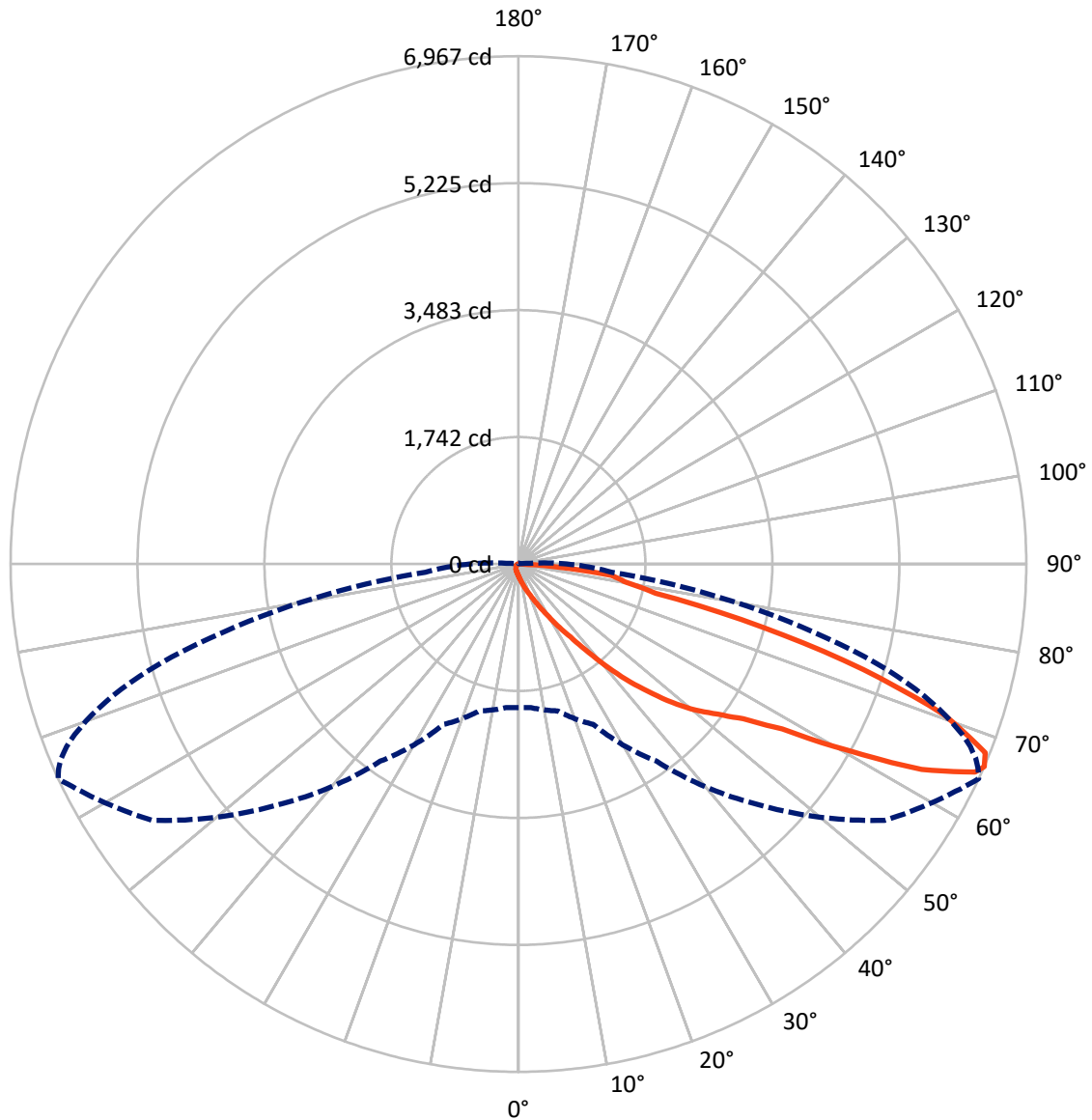


Based on 10 foot mounting height. Maximum calculated value = 9 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	118.0	0.0	118.0
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	5325.4	0.0	5325.4
	% Fixture	97.8	0.0	97.8
Total	Lumens	5443.4	0.0	5443.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.4	0.3
10°-20°	78.0	1.4
20°-30°	168.2	3.1
30°-40°	359.2	6.6
40°-50°	794.4	14.6
50°-60°	1346.2	24.7
60°-70°	1796.5	33.0
70°-80°	791.3	14.5
80°-90°	91.2	1.7
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°	5443.4	100.0
0°-180°	5443.4	100.0

Coefficient of Utilization



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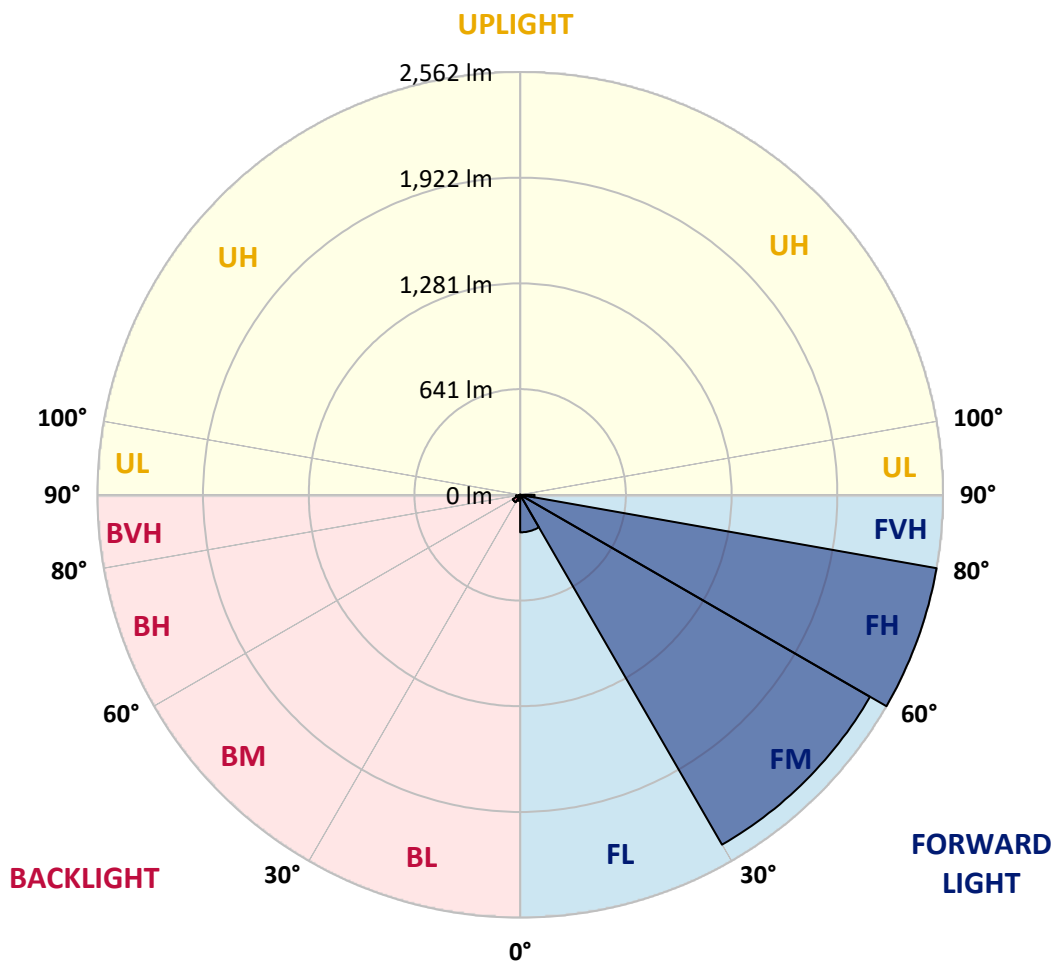
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	227.4	4.2			
FM	(30°-60°)	2448.0	45.0			
FH	(60°-80°)	2562.5	47.1			G2/5000
FVH	(80°-90°)	87.5	1.6			G1/100
BL	(0°-30°)	37.2	0.7	B0/110		
BM	(30°-60°)	51.8	1.0	B0/220		
BH	(60°-80°)	25.3	0.5	B0/110		G0/110
BVH	(80°-90°)	3.7	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3
2.5°	207.3	206.2	202.0	202.0	195.7	191.5	186.2	181.1	181.1	180.0	179.0
5°	274.2	267.9	266.8	255.4	245.9	232.4	219.8	203.0	200.9	198.8	197.8
7.5°	348.5	347.5	338.0	324.4	305.6	280.5	255.4	228.2	224.0	221.9	217.7
10°	444.8	439.5	427.0	404.0	375.7	342.2	301.4	258.4	253.3	249.1	247.0
12.5°	536.8	527.5	520.1	490.8	455.2	406.0	356.8	295.1	290.9	285.7	277.4
15°	622.7	614.3	601.8	576.7	536.8	475.1	417.6	342.2	331.8	324.4	318.1
17.5°	689.7	684.4	669.8	641.5	598.6	544.2	475.1	390.3	381.9	372.6	361.0
20°	753.4	746.2	723.2	684.4	638.4	596.5	543.1	453.2	441.6	430.2	417.6
22.5°	814.2	806.8	769.2	705.3	656.1	638.4	619.5	524.3	506.5	497.1	484.5
25°	898.9	883.2	824.6	723.2	657.2	670.8	703.2	616.4	599.7	586.0	566.2
27.5°	1013.0	992.1	900.0	749.2	661.4	706.4	799.5	728.3	710.6	694.9	672.9
30°	1141.8	1128.1	1018.3	812.1	691.8	758.7	907.3	870.7	849.7	830.9	804.7
32.5°	1271.5	1252.7	1143.8	931.4	773.4	860.2	1042.4	1036.1	1008.8	991.1	962.8
35°	1385.6	1376.1	1295.5	1127.1	959.6	1038.2	1222.3	1229.6	1205.6	1186.8	1155.3
37.5°	1463.1	1463.1	1447.3	1337.5	1255.8	1314.5	1487.0	1488.1	1464.0	1421.1	1405.5
40°	1502.8	1514.2	1570.8	1591.7	1587.5	1662.9	1834.5	1815.7	1795.8	1773.8	1721.5
42.5°	1584.5	1594.9	1715.2	1859.6	1953.9	2053.2	2171.5	2165.2	2141.2	2101.3	2053.2
45°	1722.6	1736.1	1879.6	2108.7	2302.3	2443.6	2519.0	2489.7	2465.6	2427.9	2402.7
47.5°	1898.4	1924.5	2086.7	2370.4	2603.7	2837.1	2915.5	2838.2	2817.1	2787.9	2747.0
50°	2085.7	2110.8	2283.5	2607.9	2871.6	3150.0	3280.7	3150.0	3119.6	3110.2	3064.1
52.5°	2247.8	2268.8	2435.2	2791.0	3076.7	3403.3	3593.7	3421.0	3399.1	3367.6	3334.1
55°	2344.2	2360.9	2516.9	2878.9	3215.9	3631.3	3896.1	3744.4	3711.9	3699.3	3651.2
57.5°	2376.6	2393.4	2533.6	2890.4	3291.2	3839.6	4263.5	4268.7	4230.0	4185.0	4170.3
60°	2376.6	2395.5	2513.7	2862.1	3364.5	4061.5	4753.3	5189.6	5105.9	5097.6	5044.2
62.5°	2278.2	2296.1	2415.4	2775.3	3462.9	4360.8	5435.5	6205.7	6181.6	6127.3	6039.3
65°	2064.7	2075.3	2192.4	2553.5	3425.2	4636.0	6026.8	6881.8	6843.1	6736.3	6623.4
66°	1968.5	1976.9	2086.7	2426.8	3301.7	4673.7	6131.4	6966.5	6902.7	6812.7	6685.1
67.5°	1829.3	1843.9	1921.4	2191.4	3005.6	4542.8	6065.5	6906.9	6851.4	6742.6	6615.0
70°	1221.2	1210.8	1484.0	1681.8	2289.8	3701.4	5441.9	6201.6	6202.7	6151.4	6100.1
72.5°	579.7	586.0	665.6	1035.0	1498.6	2472.8	4331.5	4950.0	5021.1	4929.0	4865.2
75°	416.5	426.0	474.1	633.1	893.7	1484.0	2807.8	3461.8	3463.9	3300.7	3155.2
77.5°	121.4	126.6	177.9	390.3	669.8	1001.5	1612.6	1924.5	1879.6	1762.3	1652.5
80°	50.2	50.2	52.3	124.5	268.9	680.2	1128.1	1481.9	1476.6	1431.6	1366.7
82.5°	18.8	19.9	25.1	51.3	63.8	167.4	752.4	1286.2	1283.0	1219.1	1173.1
85°	2.1	2.1	6.3	22.0	24.1	31.4	150.7	567.2	564.1	567.2	497.1
87.5°	0.0	0.0	1.1	2.1	3.2	4.2	6.3	22.0	24.1	23.0	20.9
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3
2.5°	179.0	176.9	176.9	175.8	175.8	175.8	174.8	173.7	173.7	172.7	171.6
5°	195.7	193.6	192.5	190.4	189.4	188.3	186.2	185.2	183.2	182.1	181.1
7.5°	215.6	211.4	210.3	207.3	204.1	202.0	199.9	196.7	194.6	190.4	189.4
10°	240.7	235.4	231.3	227.1	224.0	218.7	215.6	211.4	207.3	204.1	200.9
12.5°	273.1	265.8	259.5	255.4	248.0	241.7	235.4	232.4	224.0	219.8	214.5
15°	308.7	300.4	293.0	284.6	279.5	268.9	260.5	251.2	247.0	239.6	231.3
17.5°	354.8	341.1	329.7	321.3	310.8	300.4	290.9	281.6	268.9	260.5	250.1
20°	404.0	392.4	376.8	362.1	349.6	336.9	323.4	310.8	299.3	285.7	273.1
22.5°	466.7	450.0	431.1	416.5	399.8	386.1	367.3	350.6	331.8	313.9	299.3
25°	546.3	524.3	506.5	485.6	465.7	444.8	421.8	400.8	376.8	360.0	334.8
27.5°	644.7	623.8	599.7	572.5	552.6	521.2	490.8	464.6	436.4	410.2	381.9
30°	770.3	739.9	714.8	688.6	648.9	618.5	582.9	547.3	508.6	482.4	439.5
32.5°	921.0	888.5	850.8	813.1	776.5	733.6	689.7	645.7	602.7	554.6	510.7
35°	1105.1	1066.4	1023.4	982.7	926.1	880.1	824.6	764.0	715.8	660.3	604.8
37.5°	1348.9	1285.1	1247.4	1204.5	1128.1	1065.4	1003.6	942.9	858.1	799.5	721.1
40°	1654.6	1616.8	1555.1	1486.1	1416.9	1334.3	1250.6	1169.9	1071.6	990.0	898.9
42.5°	2013.5	1958.0	1895.2	1795.8	1725.7	1628.4	1533.2	1426.4	1306.0	1201.4	1094.6
45°	2350.4	2284.5	2236.4	2137.0	2063.7	1948.6	1833.4	1720.4	1581.3	1446.3	1322.8
47.5°	2714.7	2660.2	2580.7	2500.1	2425.8	2296.1	2171.5	2034.4	1887.9	1727.8	1567.6
50°	3034.8	2991.9	2937.5	2840.2	2757.6	2648.7	2502.2	2352.5	2167.3	2008.2	1826.2
52.5°	3306.9	3273.5	3197.1	3128.0	3053.7	2951.1	2820.3	2676.9	2477.0	2302.3	2095.1
55°	3628.2	3604.1	3537.2	3494.3	3428.3	3329.9	3207.5	3074.6	2863.3	2672.7	2438.4
57.5°	4154.6	4135.8	4077.2	4059.4	3994.6	3908.7	3758.0	3615.7	3368.7	3132.2	2864.2
60°	5026.3	4988.7	4902.8	4858.9	4721.8	4606.6	4411.1	4215.4	3917.1	3615.7	3293.3
62.5°	5959.8	5854.2	5690.8	5550.6	5356.0	5156.1	4894.5	4595.2	4245.6	3887.8	3517.3
65°	6463.2	6283.2	6077.1	5854.2	5601.9	5307.9	4978.2	4619.3	4243.5	3865.8	3474.4
66°	6520.8	6317.7	6099.0	5851.0	5570.5	5257.6	4922.8	4546.0	4155.7	3787.3	3395.9
67.5°	6448.6	6236.1	6004.9	5729.6	5426.1	5101.7	4750.1	4358.7	3983.0	3609.4	3228.5
70°	5943.1	5731.7	5525.5	5235.7	4912.3	4585.7	4253.0	3815.6	3459.7	3116.5	2777.4
72.5°	4745.9	4602.5	4398.4	4150.4	3835.4	3452.5	3175.1	2783.7	2474.9	2142.2	1879.6
75°	2965.8	2763.9	2511.6	2195.6	1954.8	1644.0	1481.9	1184.7	1008.8	855.0	706.4
77.5°	1516.4	1364.6	1187.8	1009.9	839.3	669.8	518.0	366.3	247.0	171.6	127.7
80°	1252.7	1118.8	972.2	810.0	659.3	511.7	368.4	251.2	160.2	104.7	81.7
82.5°	1035.0	921.9	791.2	640.5	509.6	401.9	279.5	182.1	113.0	73.3	57.6
85°	440.6	399.8	308.7	244.9	184.1	136.0	95.2	63.8	45.0	36.7	33.5
87.5°	18.8	20.9	19.9	15.7	11.6	11.6	10.5	8.4	8.4	8.4	8.4
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3
2.5°	171.6	170.6	169.5	169.5	168.5	167.4	161.1	156.0	149.7	145.5	141.3
5°	179.0	177.9	175.8	174.8	172.7	171.6	158.1	146.5	137.0	129.8	124.5
7.5°	186.2	185.2	182.1	179.0	177.9	175.8	153.9	139.2	126.6	118.2	113.0
10°	195.7	192.5	189.4	185.2	182.1	179.0	149.7	130.8	117.2	109.8	104.7
12.5°	209.4	204.1	198.8	193.6	189.4	184.1	147.6	123.5	109.8	101.5	96.3
15°	225.0	217.7	211.4	205.1	197.8	192.5	143.4	117.2	103.6	95.2	88.9
17.5°	239.6	231.3	221.9	212.4	205.1	197.8	139.2	111.0	97.3	88.9	82.7
20°	260.5	248.0	236.5	225.0	214.5	205.1	132.9	104.7	92.1	82.7	76.4
22.5°	283.7	268.9	254.3	238.6	225.0	212.4	127.7	99.4	86.8	77.5	70.1
25°	312.9	295.1	275.2	255.4	239.6	222.9	122.4	94.2	81.7	72.2	64.8
27.5°	353.8	328.6	306.7	281.6	257.5	238.6	118.2	90.0	76.4	66.9	59.7
30°	409.1	372.6	338.0	310.8	282.5	255.4	114.0	84.8	72.2	61.7	53.4
32.5°	470.9	428.1	388.2	347.5	311.8	280.5	109.8	80.6	66.9	56.5	49.2
35°	547.3	492.9	439.5	392.4	349.6	307.6	105.7	76.4	62.7	51.3	43.9
37.5°	657.2	589.2	519.1	458.3	402.9	347.5	102.6	72.2	57.6	46.0	38.7
40°	807.9	720.0	634.2	551.6	479.2	410.2	98.4	68.0	53.4	41.8	34.6
42.5°	971.1	864.4	751.3	658.2	558.8	472.0	94.2	63.8	49.2	37.6	30.4
45°	1174.2	1041.3	904.2	777.5	656.1	544.2	90.0	59.7	43.9	33.5	26.2
47.5°	1396.0	1226.5	1071.6	912.6	768.2	634.2	84.8	56.5	39.7	29.3	23.0
50°	1624.2	1445.2	1249.5	1068.4	896.9	724.2	79.6	51.3	35.6	26.2	18.8
52.5°	1870.1	1658.8	1458.9	1233.8	1034.0	842.5	74.3	47.1	32.5	23.0	15.7
55°	2183.0	1946.5	1712.0	1459.9	1219.1	979.5	69.1	41.8	28.3	19.9	12.5
57.5°	2576.5	2296.1	2008.2	1723.6	1431.6	1159.5	64.8	36.7	24.1	16.7	10.5
60°	2948.0	2620.4	2272.0	1944.4	1614.7	1297.6	58.6	32.5	20.9	13.6	10.5
62.5°	3140.5	2766.9	2391.3	2030.2	1678.6	1346.8	52.3	27.2	17.8	11.6	9.5
65°	3093.4	2712.6	2348.3	1984.1	1639.8	1315.4	46.0	24.1	15.7	10.5	9.5
66°	3025.4	2648.7	2282.4	1936.0	1607.5	1282.0	42.9	23.0	14.6	10.5	8.4
67.5°	2876.8	2512.7	2163.1	1840.8	1518.5	1218.1	38.7	20.9	13.6	9.5	8.4
70°	2457.2	2126.4	1847.1	1560.4	1297.6	1026.6	31.4	17.8	11.6	8.4	8.4
72.5°	1626.3	1401.3	1215.0	1045.4	873.8	678.1	26.2	14.6	9.5	8.4	7.4
75°	613.2	554.6	476.2	428.1	373.6	327.6	20.9	9.5	7.4	7.4	7.4
77.5°	108.9	100.5	88.9	81.7	75.4	69.1	16.7	6.3	6.3	7.4	7.4
80°	73.3	68.0	61.7	56.5	52.3	47.1	11.6	5.3	6.3	6.3	7.4
82.5°	52.3	49.2	46.0	41.8	38.7	34.6	7.4	5.3	6.3	6.3	6.3
85°	31.4	29.3	27.2	25.1	22.0	20.9	5.3	5.3	5.3	6.3	6.3
87.5°	8.4	7.4	8.4	8.4	6.3	7.4	4.2	4.2	4.2	5.3	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-SL3-HSS

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	164.3	164.3	164.3	164.3	164.3
2.5°	139.2	139.2	137.0	140.2	140.2
5°	120.3	120.3	119.3	120.3	120.3
7.5°	109.8	108.9	108.9	108.9	109.8
10°	100.5	99.4	99.4	99.4	99.4
12.5°	92.1	91.0	90.0	91.0	91.0
15°	84.8	82.7	82.7	82.7	82.7
17.5°	78.5	76.4	75.4	75.4	75.4
20°	72.2	69.1	69.1	69.1	69.1
22.5°	65.9	62.7	62.7	62.7	62.7
25°	59.7	56.5	56.5	56.5	56.5
27.5°	54.4	51.3	51.3	51.3	51.3
30°	48.1	46.0	46.0	47.1	46.0
32.5°	43.9	40.8	40.8	41.8	41.8
35°	38.7	36.7	36.7	36.7	36.7
37.5°	33.5	31.4	31.4	31.4	31.4
40°	29.3	27.2	26.2	27.2	27.2
42.5°	25.1	23.0	22.0	22.0	22.0
45°	22.0	18.8	17.8	18.8	18.8
47.5°	17.8	15.7	15.7	16.7	16.7
50°	13.6	13.6	14.6	16.7	16.7
52.5°	12.5	12.5	14.6	16.7	16.7
55°	11.6	12.5	14.6	15.7	16.7
57.5°	10.5	12.5	14.6	15.7	15.7
60°	10.5	11.6	13.6	15.7	15.7
62.5°	9.5	10.5	12.5	14.6	14.6
65°	9.5	10.5	12.5	14.6	14.6
66°	9.5	10.5	12.5	14.6	14.6
67.5°	9.5	10.5	12.5	14.6	14.6
70°	9.5	10.5	12.5	13.6	13.6
72.5°	8.4	9.5	11.6	13.6	13.6
75°	8.4	9.5	11.6	13.6	13.6
77.5°	8.4	9.5	11.6	13.6	13.6
80°	8.4	9.5	11.6	12.5	13.6
82.5°	7.4	9.5	10.5	12.5	12.5
85°	7.4	8.4	10.5	11.6	12.5
87.5°	6.3	7.4	8.4	10.5	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)