

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: P162617

Luminaire Tested: **ECM-E04-LED-E1-SL4-HSS**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P162617
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-E04-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: (84) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7738.5 lumens
Efficiency: N/A
Efficacy: 79.6 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

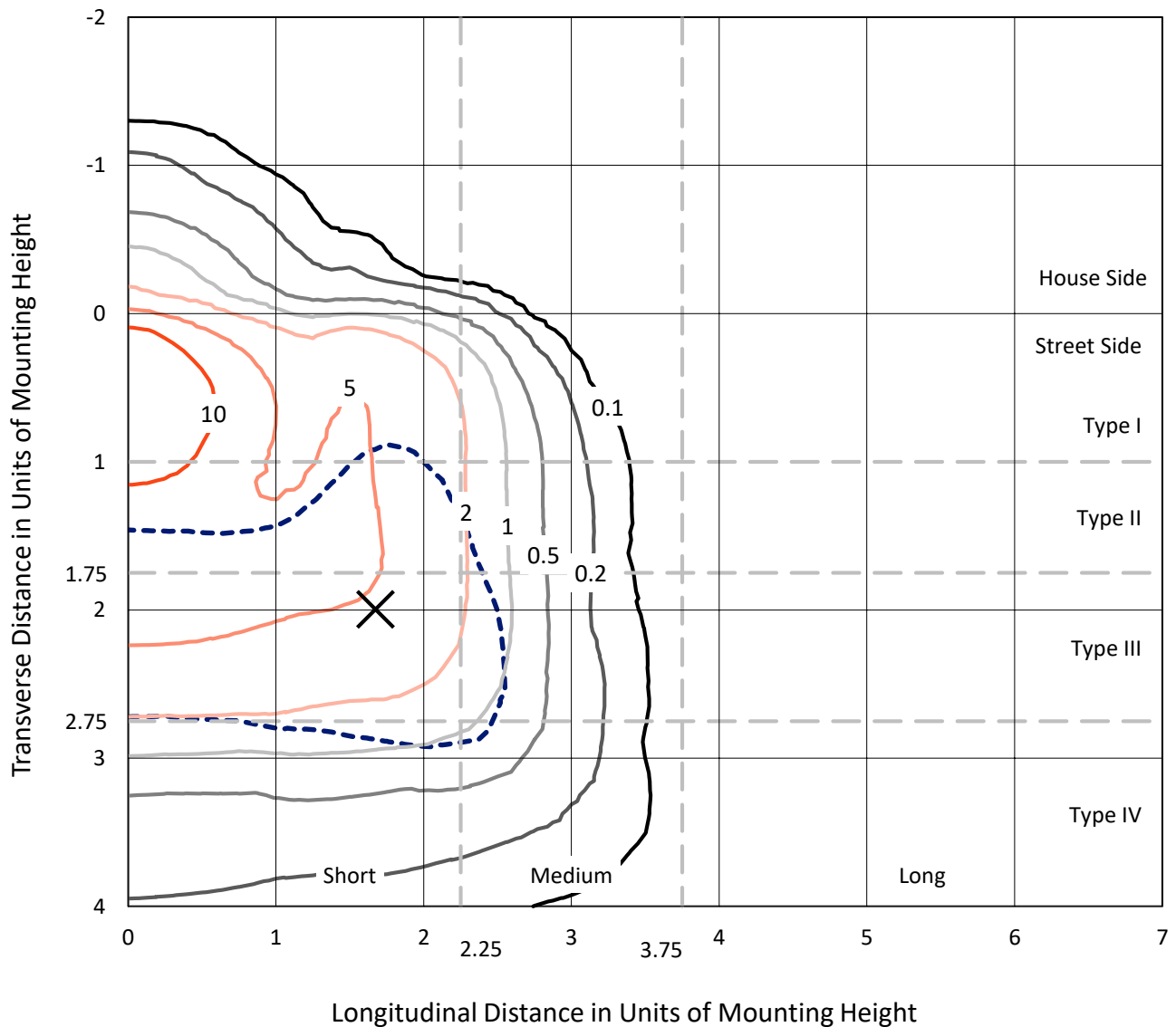
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

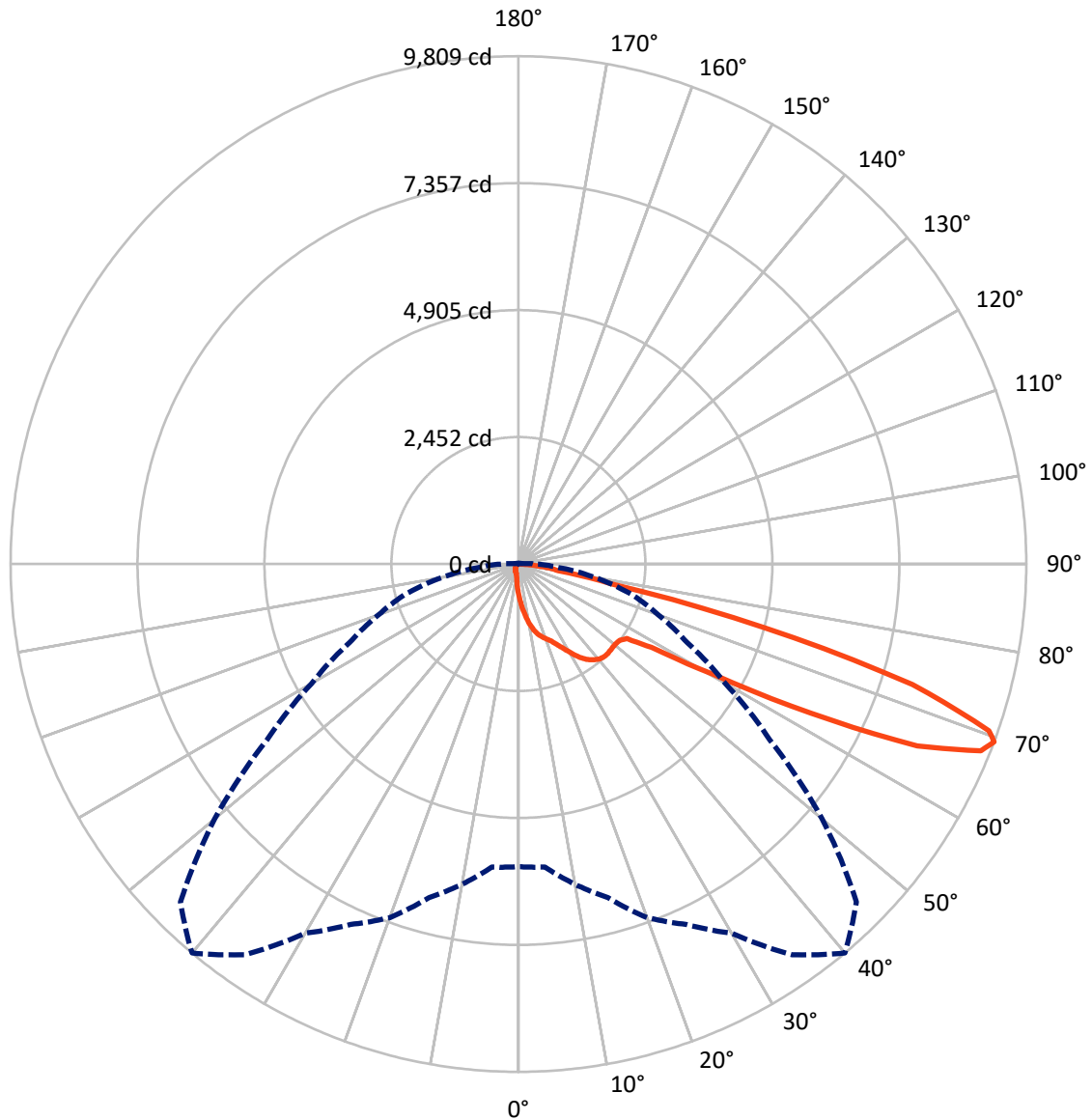


Based on 10 foot mounting height. Maximum calculated value = 17.3 fc
 Type IV - Short - Semi-Cutoff

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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	230.5	0.0	230.5
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	7508.0	0.0	7508.0
	% Fixture	97.0	0.0	97.0
Total	Lumens	7738.5	0.0	7738.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.1	0.8
10°-20°	207.1	2.7
20°-30°	396.4	5.1
30°-40°	659.2	8.5
40°-50°	892.0	11.5
50°-60°	1395.0	18.0
60°-70°	2868.0	37.1
70°-80°	1154.0	14.9
80°-90°	106.8	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°	7738.5	100.0
0°-180°	7738.5	100.0



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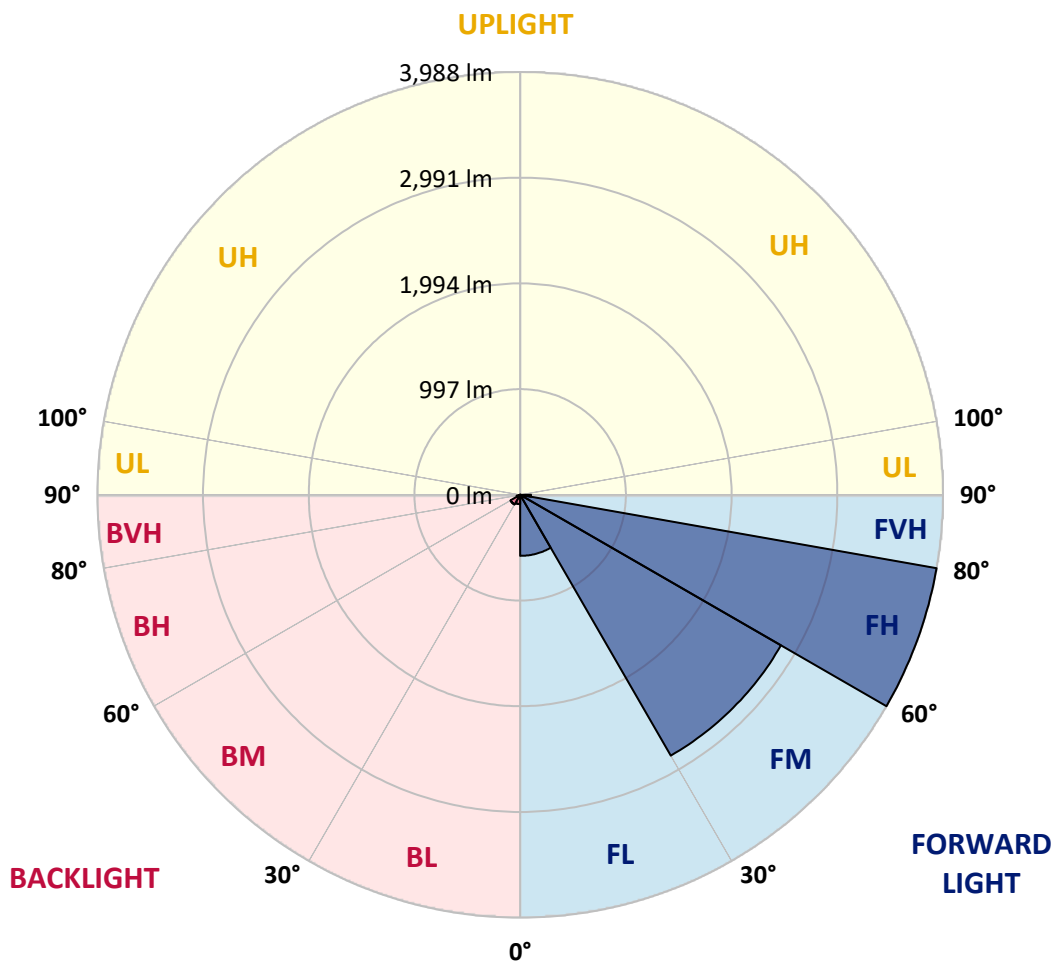
CATALOG NUMBER: ECM-E04-LED-E1-SL4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	575.9	7.4			
FM	(30°-60°)	2840.9	36.7			
FH	(60°-80°)	3988.4	51.5			G2/5000
FVH	(80°-90°)	102.8	1.3			G2/225
BL	(0°-30°)	87.6	1.1	B0/110		
BM	(30°-60°)	105.2	1.4	B0/220		
BH	(60°-80°)	33.6	0.4	B0/110		G0/110
BVH	(80°-90°)	4.0	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°	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4
2.5°	779.6	770.8	760.7	760.7	747.9	747.9	740.3	720.0	717.5	706.1	694.7
5°	995.1	987.5	974.8	963.5	953.3	935.6	922.9	898.8	872.1	846.8	824.0
7.5°	1205.6	1201.7	1178.9	1175.2	1158.7	1129.5	1104.1	1068.7	1023.1	987.5	945.7
10°	1400.8	1391.9	1386.8	1365.3	1341.2	1309.5	1270.3	1227.1	1173.9	1118.1	1058.5
12.5°	1555.5	1550.4	1527.6	1518.7	1493.3	1461.6	1412.1	1356.4	1303.2	1230.9	1161.2
15°	1670.8	1661.9	1646.7	1632.8	1602.4	1574.4	1528.8	1468.0	1403.3	1324.7	1241.1
17.5°	1767.2	1750.7	1746.8	1725.3	1693.6	1660.7	1610.0	1554.1	1478.1	1399.5	1308.3
20°	1896.4	1873.6	1866.0	1834.3	1797.6	1752.0	1693.6	1623.9	1544.0	1457.9	1364.0
22.5°	2048.5	2032.1	2015.6	1987.7	1940.8	1876.1	1791.2	1715.2	1613.7	1518.7	1417.2
25°	2264.1	2250.1	2223.5	2185.5	2127.2	2049.9	1947.2	1835.6	1716.4	1594.8	1475.6
27.5°	2473.2	2460.5	2441.6	2412.4	2346.5	2261.6	2134.8	1992.8	1842.0	1694.9	1563.1
30°	2669.7	2658.3	2639.3	2610.1	2551.9	2468.1	2324.9	2172.8	1985.2	1814.0	1655.6
32.5°	2881.5	2877.6	2856.1	2814.3	2763.6	2650.7	2494.8	2331.2	2141.1	1943.3	1758.3
35°	3121.1	3091.9	3071.6	3029.7	2943.6	2823.1	2640.5	2461.9	2261.6	2058.7	1852.1
37.5°	3323.9	3296.0	3270.7	3217.3	3112.1	2958.8	2752.1	2555.6	2349.1	2142.4	1932.0
40°	3472.1	3458.3	3427.9	3358.1	3240.1	3057.6	2834.5	2620.3	2412.4	2204.5	1996.5
42.5°	3582.4	3560.9	3526.7	3454.4	3314.9	3107.1	2867.5	2646.9	2441.6	2242.5	2038.4
45°	3623.1	3605.3	3573.6	3494.9	3344.1	3121.1	2866.3	2639.3	2442.8	2254.0	2066.3
47.5°	3598.9	3581.2	3553.3	3479.7	3331.5	3104.5	2843.5	2617.7	2430.1	2257.7	2091.7
50°	3519.1	3508.9	3487.3	3425.3	3292.1	3072.8	2823.1	2606.4	2427.6	2276.8	2127.2
52.5°	3511.5	3505.2	3478.5	3416.4	3280.8	3062.7	2820.5	2612.7	2449.2	2300.8	2152.5
55°	4291.1	4201.1	3999.5	3828.4	3546.9	3212.3	2948.7	2715.3	2540.4	2395.9	2292.0
57.5°	6098.8	5964.4	5699.5	5373.7	4727.2	4092.1	3583.7	3216.1	3034.8	2968.9	3008.3
60°	6945.6	6921.5	6879.7	6725.1	6394.1	5847.9	5239.3	4581.3	4317.7	4294.9	4374.8
62.5°	7347.5	7332.3	7344.9	7325.9	7223.2	7063.5	6888.5	6604.7	6343.5	6174.9	5817.3
65°	7532.5	7542.7	7614.9	7672.0	7684.7	7726.5	7854.5	8208.3	8466.8	8032.0	7039.5
67.5°	7062.3	7121.9	7287.9	7495.7	7739.2	7974.9	8355.3	9100.7	9631.9	9120.9	7711.3
69°	5846.5	5875.7	6281.3	6673.1	7267.6	7683.5	8234.8	9212.3	9809.3	9232.5	7658.0
70°	4602.9	4629.6	5064.4	5596.8	6602.1	7137.1	7858.4	9023.3	9643.2	9084.1	7384.3
72.5°	2076.4	2038.4	2191.9	2477.1	3569.7	4419.1	5680.5	7310.7	7956.0	7277.7	5524.5
75°	1450.3	1433.7	1450.3	1451.5	1621.3	2091.7	2639.3	3962.8	4900.8	4228.9	2639.3
77.5°	1123.2	1111.7	1100.4	1087.7	1108.0	1241.1	1294.3	1405.9	1825.5	1726.5	1006.5
80°	888.7	878.5	906.4	897.5	897.5	912.7	902.5	860.8	782.1	725.1	649.1
82.5°	413.2	415.7	415.7	451.3	543.9	635.1	664.3	622.4	552.7	470.3	379.1
85°	39.3	44.4	74.8	115.3	229.5	258.7	259.9	215.5	215.5	169.9	136.9
87.5°	0.0	1.3	1.3	1.3	11.5	31.7	26.7	7.6	3.9	3.9	6.4
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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CATALOG NUMBER: ECM-E04-LED-E1-SL4-HSS

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4
2.5°	674.4	670.7	655.3	640.1	626.3	611.1	597.1	583.1	567.9	556.5	542.5
5°	788.5	760.7	728.9	698.5	668.1	636.4	603.5	574.3	543.9	516.0	489.3
7.5°	903.9	849.3	806.3	751.7	702.3	652.8	607.2	560.3	517.2	476.7	438.7
10°	1001.5	935.6	868.4	798.7	727.6	661.7	598.4	542.5	485.5	436.1	389.2
12.5°	1081.3	997.6	915.2	827.7	747.9	664.3	585.7	518.5	451.3	395.5	347.3
15°	1153.6	1057.2	958.4	856.9	755.6	660.4	572.9	489.3	420.9	357.5	302.9
17.5°	1211.9	1101.6	990.0	876.0	766.9	655.3	556.5	469.1	389.2	323.2	270.0
20°	1262.7	1147.2	1026.8	898.8	774.5	654.1	542.5	443.7	361.3	291.6	239.6
22.5°	1309.5	1194.1	1064.8	928.0	786.0	652.8	529.9	424.7	337.2	267.5	215.5
25°	1362.8	1241.1	1105.5	958.4	806.3	657.9	522.3	409.5	315.6	244.7	196.5
27.5°	1422.4	1294.3	1153.6	996.4	832.8	668.1	519.7	392.9	296.7	223.1	181.3
30°	1506.0	1357.7	1201.7	1034.4	856.9	679.5	517.2	382.8	277.6	206.7	166.0
32.5°	1579.5	1419.9	1255.1	1073.7	883.6	690.9	516.0	368.9	259.9	190.1	154.7
35°	1656.8	1476.8	1300.7	1111.7	906.4	703.6	514.7	358.8	243.3	173.7	143.2
37.5°	1724.0	1525.1	1336.1	1144.7	931.7	714.9	516.0	349.9	228.1	159.7	133.1
40°	1781.1	1574.4	1375.5	1175.2	958.4	732.7	517.2	341.1	212.9	147.1	124.3
42.5°	1831.7	1621.3	1417.2	1209.3	988.8	753.1	524.8	333.3	200.3	135.6	115.3
45°	1871.1	1664.4	1462.9	1257.6	1038.3	786.0	538.8	328.3	187.6	125.5	107.7
47.5°	1911.6	1727.9	1540.3	1333.6	1110.5	838.0	562.8	327.1	177.5	117.9	101.5
50°	1967.5	1791.2	1608.7	1410.9	1176.4	891.2	592.0	328.3	164.8	110.3	95.1
52.5°	2008.0	1855.9	1697.5	1545.3	1333.6	1053.5	704.8	351.2	158.4	104.0	87.5
55°	2247.6	2220.9	2224.8	2250.1	2086.7	1792.5	1178.9	507.1	186.4	117.9	86.3
57.5°	3169.2	3263.1	3317.5	3316.3	3046.3	2526.5	1583.3	651.6	207.9	136.9	102.7
60°	4381.1	4310.1	4210.0	3962.8	3604.0	2884.0	1770.9	701.1	180.0	109.1	93.9
62.5°	5452.3	5036.5	4667.6	4267.1	3796.7	3008.3	1808.9	697.2	157.2	82.4	65.9
65°	6120.4	5372.4	4776.7	4274.7	3720.7	2904.3	1711.3	640.1	133.1	67.2	54.5
67.5°	6280.1	5191.2	4348.1	3708.0	3108.4	2260.3	1256.3	481.7	104.0	55.7	48.1
69°	5931.5	4614.4	3602.8	2876.4	2261.6	1499.6	777.1	304.3	79.9	50.7	44.4
70°	5456.1	4013.5	2934.7	2308.4	1674.7	1053.5	543.9	214.3	64.7	46.9	40.5
72.5°	3510.3	2108.1	1442.7	1004.0	690.9	419.6	212.9	96.4	49.5	39.3	32.9
75°	1361.5	779.6	565.3	429.7	336.0	233.2	129.3	62.1	41.9	32.9	25.3
77.5°	670.7	513.5	419.6	287.7	167.3	104.0	69.7	48.1	34.3	24.1	16.5
80°	529.9	352.4	210.4	130.5	98.9	74.8	53.2	39.3	25.3	15.2	11.5
82.5°	271.3	148.3	109.1	88.8	73.5	58.3	43.1	27.9	16.5	10.1	8.9
85°	84.9	62.1	55.7	54.5	50.7	41.9	30.4	17.7	10.1	6.4	6.4
87.5°	6.4	8.9	11.5	8.9	10.1	8.9	11.5	7.6	5.1	5.1	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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4	584.4
2.5°	532.4	517.2	503.3	494.4	477.9	471.6	465.2	462.7	451.3	453.9	443.7
5°	465.2	438.7	418.4	398.0	379.1	365.1	353.7	339.7	328.3	323.2	313.1
7.5°	404.4	370.1	343.6	322.0	299.2	281.5	266.3	256.1	245.9	235.7	230.7
10°	351.2	314.4	284.0	262.4	240.8	225.6	214.3	206.7	200.3	196.5	195.2
12.5°	301.7	266.3	238.3	219.3	202.8	195.2	190.1	186.4	185.1	183.9	183.9
15°	263.7	228.1	206.7	192.7	185.1	181.3	180.0	177.5	174.9	173.7	173.7
17.5°	228.1	201.6	186.4	178.8	174.9	172.4	169.9	167.3	164.8	163.5	163.5
20°	204.1	182.5	174.9	169.9	166.0	163.5	159.7	157.2	155.9	154.7	153.3
22.5°	185.1	171.2	166.0	162.3	157.2	153.3	150.8	148.3	145.7	144.5	143.2
25°	171.2	162.3	158.4	153.3	148.3	144.5	140.7	136.9	134.4	133.1	130.5
27.5°	160.9	154.7	149.6	143.2	138.1	134.4	130.5	126.8	124.3	121.7	120.4
30°	152.1	145.7	139.5	134.4	128.0	124.3	119.2	115.3	114.1	111.6	109.1
32.5°	143.2	136.9	130.5	124.3	117.9	112.8	110.3	105.2	102.7	101.5	98.9
35°	133.1	126.8	119.2	114.1	107.7	102.7	98.9	95.1	92.5	90.0	88.8
37.5°	124.3	116.7	109.1	102.7	97.6	92.5	88.8	84.9	82.4	79.9	78.5
40°	114.1	106.5	98.9	92.5	87.5	83.7	79.9	76.0	73.5	72.3	72.3
42.5°	105.2	96.4	88.8	83.7	79.9	74.8	70.9	67.2	65.9	64.7	65.9
45°	96.4	87.5	81.1	76.0	72.3	67.2	63.3	60.8	59.6	60.8	62.1
47.5°	88.8	79.9	73.5	69.7	65.9	62.1	58.3	55.7	55.7	58.3	60.8
50°	81.1	72.3	67.2	64.7	60.8	57.1	52.0	50.7	52.0	54.5	57.1
52.5°	73.5	63.3	59.6	58.3	54.5	50.7	46.9	45.6	46.9	49.5	48.1
55°	65.9	55.7	54.5	53.2	49.5	44.4	40.5	40.5	40.5	39.3	36.8
57.5°	63.3	49.5	48.1	46.9	43.1	38.0	35.5	32.9	31.7	27.9	26.7
60°	65.9	44.4	44.4	41.9	38.0	32.9	29.2	25.3	22.8	20.3	20.3
62.5°	53.2	40.5	39.3	36.8	31.7	26.7	22.8	19.1	17.7	16.5	16.5
65°	43.1	36.8	34.3	30.4	26.7	21.6	17.7	15.2	14.0	14.0	15.2
67.5°	39.3	32.9	29.2	25.3	21.6	16.5	14.0	12.7	12.7	14.0	14.0
69°	36.8	30.4	26.7	22.8	19.1	15.2	12.7	12.7	12.7	12.7	14.0
70°	34.3	29.2	25.3	21.6	16.5	12.7	11.5	11.5	12.7	12.7	14.0
72.5°	26.7	22.8	21.6	17.7	12.7	11.5	10.1	11.5	11.5	12.7	12.7
75°	20.3	16.5	16.5	14.0	10.1	8.9	8.9	10.1	10.1	11.5	11.5
77.5°	14.0	11.5	11.5	10.1	8.9	7.6	7.6	8.9	10.1	10.1	11.5
80°	10.1	8.9	7.6	8.9	7.6	6.4	7.6	8.9	8.9	10.1	10.1
82.5°	7.6	7.6	7.6	7.6	6.4	6.4	7.6	7.6	8.9	10.1	10.1
85°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	7.6	7.6	8.9	8.9
87.5°	3.9	3.9	3.9	5.1	5.1	6.4	6.4	6.4	6.4	7.6	7.6
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: ECM-E04-LED-E1-SL4-HSS

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	584.4	584.4	584.4	584.4
2.5°	441.2	439.9	434.8	436.1
5°	309.3	301.7	306.8	305.5
7.5°	226.9	225.6	224.4	226.9
10°	194.0	194.0	192.7	194.0
12.5°	182.5	182.5	182.5	182.5
15°	173.7	173.7	172.4	172.4
17.5°	163.5	163.5	163.5	162.3
20°	153.3	152.1	152.1	152.1
22.5°	142.0	140.7	140.7	140.7
25°	130.5	129.3	129.3	129.3
27.5°	119.2	117.9	116.7	116.7
30°	107.7	106.5	105.2	105.2
32.5°	96.4	95.1	93.9	93.9
35°	86.3	86.3	84.9	83.7
37.5°	77.3	77.3	77.3	77.3
40°	70.9	72.3	72.3	72.3
42.5°	67.2	68.4	69.7	70.9
45°	64.7	67.2	68.4	68.4
47.5°	63.3	64.7	65.9	65.9
50°	58.3	57.1	57.1	57.1
52.5°	46.9	44.4	43.1	41.9
55°	34.3	32.9	30.4	30.4
57.5°	24.1	24.1	22.8	22.8
60°	19.1	19.1	17.7	19.1
62.5°	16.5	16.5	16.5	16.5
65°	15.2	15.2	15.2	15.2
67.5°	15.2	15.2	15.2	15.2
69°	14.0	14.0	14.0	14.0
70°	14.0	14.0	14.0	14.0
72.5°	12.7	12.7	12.7	12.7
75°	11.5	12.7	12.7	12.7
77.5°	11.5	11.5	11.5	11.5
80°	10.1	10.1	11.5	11.5
82.5°	10.1	10.1	10.1	10.1
85°	8.9	8.9	10.1	10.1
87.5°	7.6	7.6	8.9	8.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)