

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P135611

Luminaire Tested: **LD6A30D010TE ERM6A30840 6LM111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135611
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23399)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A30D010TE ERM6A30840 6LM111LI
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL WASH LUMINAIRE
SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER
Light Source: (1) HIGH LUMEN LED 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3060.0 lumens
Efficiency: N/A
Efficacy: 67.4 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.93 / 0.89
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

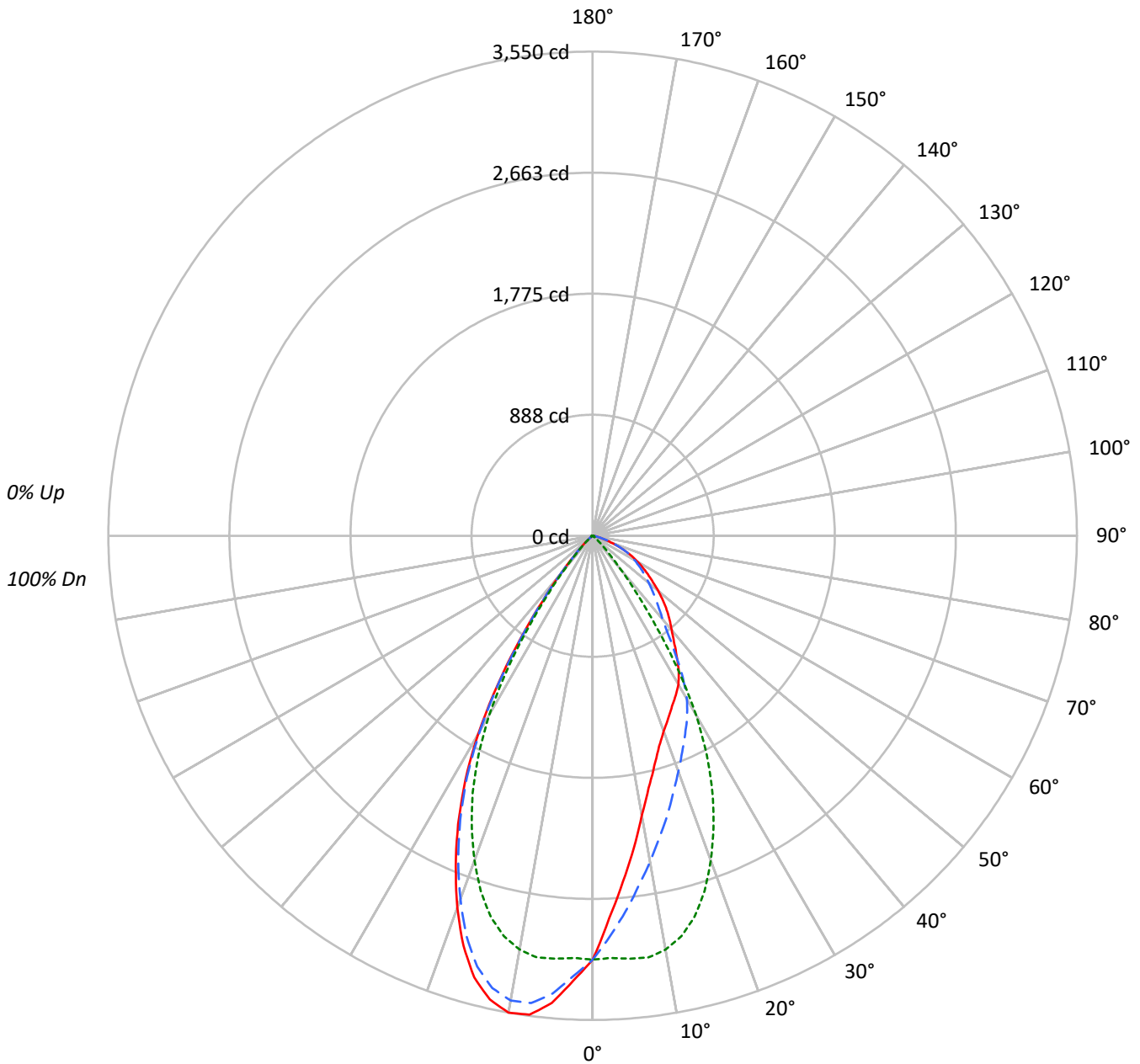
Input Watts (W): 45.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100															
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92				92															
2	106	101	96	93	104	99	95	91	96	92	89	93	90	88	90	88	86	84				84															
3	100	93	87	83	98	92	86	82	89	85	81	86	83	80	84	81	78	77				77															
4	95	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	71				71															
5	89	80	74	69	88	79	73	69	77	72	68	75	71	67	74	70	67	65				65															
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60				60															
7	80	70	63	59	78	69	63	59	68	62	58	67	62	58	65	61	58	56				56															
8	76	65	59	55	74	65	59	54	64	58	54	63	58	54	62	57	54	52				52															
9	72	62	55	51	71	61	55	51	60	55	51	59	54	50	58	54	50	49				49															
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46				46															

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	202794	202794	202794
5°	166632	203844	225206
10°	137748	204107	235197
15°	117982	195163	226435
20°	105787	175770	201340
25°	99231	149679	167855
30°	94807	114153	126357
35°	85482	64695	73249
40°	76709	26350	31009
45°	70877	9125	10481
50°	63648	3207	3420
55°	56258	1911	1672
60°	49700	1644	1370
65°	40940	1297	973
70°	27296	1202	801
75°	14847	1059	529
80°	7890	2367	0
85°	3144	3144	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.4	9.5
10°-20°	752.8	24.6
20°-30°	889.4	29.1
30°-40°	592.7	19.4
40°-50°	257.1	8.4
50°-60°	154.2	5.0
60°-70°	92.5	3.0
70°-80°	28.4	0.9
80°-90°	3.5	0.1
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°-30°	1931.5	63.1
0°-40°	2524.3	82.5
0°-60°	2935.5	95.9
0°-90°	3060.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3060.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3108	3108	3108	3108	3108	
5°	2544	2765	3113	3369	3439	230
15°	1747	2117	2890	3270	3352	492
25°	1378	1604	2079	2296	2332	637
35°	1073	1056	812	903	920	672
45°	768	650	99	114	114	591
55°	495	440	17	15	15	445
65°	265	263	8	6	6	260
75°	59	65	4	2	2	71
85°	4	6	4	0	0	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4
2.5°	2805.3	2853.7	2874.8	2889.5	2834.8	2893.7	2874.8	2902.1	2910.6	2937.9	2963.2
5°	2544.4	2590.7	2613.8	2630.7	2588.6	2655.9	2653.8	2689.6	2719.0	2765.3	2796.9
7.5°	2310.8	2331.8	2355.0	2378.1	2359.2	2420.2	2430.7	2481.2	2525.4	2588.6	2647.5
10°	2079.3	2100.3	2123.5	2148.7	2140.3	2201.3	2224.5	2281.3	2340.2	2424.4	2487.5
12.5°	1894.1	1915.1	1936.2	1961.4	1957.2	2018.2	2047.7	2108.7	2180.3	2264.5	2336.0
15°	1746.8	1765.7	1786.7	1803.6	1807.8	1864.6	1896.2	1955.1	2030.9	2117.1	2190.8
17.5°	1618.4	1639.4	1658.4	1673.1	1677.3	1729.9	1761.5	1814.1	1887.8	1969.8	2041.4
20°	1523.7	1542.6	1559.5	1574.2	1574.2	1620.5	1647.8	1696.2	1761.5	1837.2	1898.3
22.5°	1447.9	1464.7	1479.5	1492.1	1492.1	1532.1	1555.2	1595.2	1652.0	1715.2	1765.7
25°	1378.5	1395.3	1407.9	1418.4	1416.3	1454.2	1473.2	1502.6	1551.0	1603.6	1641.5
27.5°	1319.5	1336.4	1346.9	1361.6	1353.2	1384.8	1399.5	1424.8	1462.6	1500.5	1521.6
30°	1258.5	1275.3	1285.9	1298.5	1290.1	1317.4	1325.8	1338.5	1363.7	1382.7	1384.8
32.5°	1174.3	1189.1	1199.6	1205.9	1195.4	1216.4	1216.4	1218.5	1226.9	1229.0	1212.2
35°	1073.3	1083.8	1092.2	1094.4	1081.7	1094.4	1092.2	1077.5	1073.3	1056.5	1022.8
37.5°	978.6	991.2	995.4	995.4	978.6	984.9	976.5	953.3	936.5	907.0	860.7
40°	900.7	911.3	913.4	911.3	894.4	896.5	883.9	856.5	833.4	797.6	738.7
42.5°	835.5	843.9	846.0	843.9	827.1	827.1	814.5	785.0	757.6	717.6	656.6
45°	768.2	776.6	780.8	776.6	761.8	761.8	747.1	719.7	692.4	650.3	589.3
47.5°	698.7	705.0	709.2	707.1	692.4	692.4	679.8	652.4	629.3	591.4	532.4
50°	627.1	635.6	639.8	637.7	625.0	625.0	614.5	589.3	570.3	536.7	484.0
52.5°	557.7	568.2	570.3	566.1	557.7	555.6	549.3	526.1	511.4	488.2	437.7
55°	494.6	503.0	503.0	503.0	492.5	490.4	486.1	467.2	458.8	439.8	397.8
57.5°	437.7	444.1	441.9	439.8	435.6	431.4	427.2	412.5	408.3	395.7	359.9
60°	380.9	387.2	385.1	383.0	378.8	374.6	370.4	359.9	359.9	351.5	322.0
62.5°	326.2	330.4	328.3	326.2	326.2	322.0	319.9	311.5	313.6	309.4	284.1
65°	265.2	271.5	269.4	269.4	271.5	271.5	269.4	265.2	265.2	263.1	242.0
67.5°	202.0	208.3	206.2	208.3	214.7	216.8	216.8	214.7	214.7	210.5	191.5
70°	143.1	147.3	147.3	149.4	155.7	157.8	164.2	157.8	157.8	153.6	138.9
72.5°	94.7	96.8	98.9	103.1	105.2	107.3	111.5	111.5	109.4	103.1	92.6
75°	58.9	61.0	61.0	63.1	65.2	67.3	71.6	69.4	67.3	65.2	56.8
77.5°	35.8	35.8	37.9	37.9	40.0	42.1	42.1	42.1	40.0	37.9	33.7
80°	21.0	21.0	21.0	23.1	23.1	23.1	23.1	23.1	23.1	21.0	18.9
82.5°	10.5	10.5	10.5	12.6	12.6	12.6	12.6	12.6	12.6	10.5	10.5
85°	4.2	4.2	4.2	6.3	6.3	6.3	6.3	6.3	6.3	6.3	4.2
87.5°	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	2.1	2.1	2.1
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4
2.5°	2988.4	2988.4	2982.1	3020.0	3068.4	3060.0	3062.1	3097.9	3112.6	3137.8	3161.0
5°	2851.6	2874.8	2891.6	2952.6	3022.1	3034.7	3057.9	3112.6	3146.3	3188.4	3228.3
7.5°	2714.8	2763.2	2803.2	2883.2	2973.7	3007.4	3049.5	3118.9	3163.1	3219.9	3274.6
10°	2573.8	2641.2	2700.1	2796.9	2902.1	2950.5	3003.2	3081.0	3139.9	3201.0	3262.0
12.5°	2432.8	2514.9	2588.6	2695.9	2807.4	2866.4	2925.3	3007.4	3070.5	3133.6	3196.8
15°	2293.9	2382.3	2460.2	2573.8	2687.5	2748.5	2807.4	2889.5	2956.9	3015.8	3078.9
17.5°	2140.3	2239.2	2310.8	2418.1	2527.5	2588.6	2653.8	2729.6	2788.5	2839.0	2900.0
20°	1990.9	2083.5	2148.7	2247.6	2346.5	2403.4	2464.4	2531.7	2584.4	2628.5	2685.4
22.5°	1845.7	1927.7	1988.8	2079.3	2155.0	2203.4	2256.0	2315.0	2361.3	2397.1	2447.6
25°	1704.7	1769.9	1816.2	1887.8	1948.8	1986.7	2030.9	2079.3	2119.3	2148.7	2195.0
27.5°	1563.7	1607.9	1624.7	1668.9	1706.8	1748.9	1772.0	1809.9	1845.7	1868.8	1908.8
30°	1401.6	1416.3	1401.6	1414.2	1424.8	1443.7	1471.1	1515.3	1532.1	1546.8	1586.8
32.5°	1199.6	1189.1	1140.7	1121.7	1109.1	1128.0	1132.2	1165.9	1176.4	1189.1	1220.6
35°	987.0	949.1	871.3	822.9	793.4	795.5	776.6	812.3	818.7	831.3	854.4
37.5°	806.0	745.0	644.0	576.6	532.4	521.9	498.8	519.8	521.9	530.3	547.2
40°	673.4	587.2	473.5	393.5	345.1	324.1	300.9	309.4	309.4	315.7	326.2
42.5°	580.8	488.2	359.9	273.6	221.0	195.7	176.8	176.8	176.8	178.9	185.2
45°	511.4	408.3	279.9	191.5	143.1	117.9	98.9	98.9	96.8	96.8	101.0
47.5°	454.6	351.5	221.0	141.0	92.6	69.4	56.8	52.6	50.5	52.6	54.7
50°	408.3	307.3	183.1	107.3	65.2	46.3	35.8	31.6	29.5	29.5	29.5
52.5°	368.3	271.5	153.6	86.3	50.5	33.7	25.3	21.0	18.9	18.9	18.9
55°	334.6	239.9	132.6	71.6	42.1	29.5	21.0	16.8	14.7	14.7	14.7
57.5°	300.9	212.6	113.6	61.0	35.8	25.3	18.9	14.7	12.6	12.6	12.6
60°	267.3	185.2	98.9	50.5	29.5	21.0	16.8	12.6	10.5	10.5	10.5
62.5°	233.6	157.8	82.1	42.1	25.3	18.9	12.6	10.5	10.5	8.4	8.4
65°	193.6	128.4	67.3	35.8	21.0	14.7	12.6	8.4	8.4	8.4	8.4
67.5°	151.5	98.9	50.5	27.4	16.8	12.6	10.5	8.4	6.3	6.3	6.3
70°	107.3	69.4	37.9	21.0	14.7	10.5	8.4	6.3	6.3	6.3	4.2
72.5°	71.6	46.3	27.4	16.8	12.6	8.4	6.3	6.3	4.2	4.2	4.2
75°	46.3	29.5	18.9	12.6	8.4	8.4	6.3	4.2	4.2	4.2	2.1
77.5°	27.4	18.9	12.6	8.4	6.3	6.3	6.3	6.3	6.3	4.2	2.1
80°	14.7	10.5	8.4	6.3	4.2	6.3	6.3	6.3	6.3	4.2	2.1
82.5°	8.4	6.3	4.2	4.2	4.2	4.2	4.2	6.3	6.3	4.2	2.1
85°	4.2	4.2	2.1	2.1	2.1	4.2	4.2	4.2	4.2	2.1	2.1
87.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	4.2	4.2	2.1	2.1
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4	3108.4
2.5°	3179.9	3192.6	3196.8	3203.1	3238.9	3230.4	3262.0	3262.0	3287.3	3272.5	3287.3
5°	3262.0	3289.4	3302.0	3318.8	3369.3	3369.3	3407.2	3413.5	3447.2	3436.7	3451.4
7.5°	3314.6	3348.3	3365.1	3392.5	3447.2	3455.6	3491.4	3501.9	3541.9	3535.6	3544.0
10°	3304.1	3339.9	3360.9	3390.4	3447.2	3459.8	3491.4	3510.3	3548.2	3539.8	3544.0
12.5°	3238.9	3272.5	3295.7	3323.0	3382.0	3396.7	3424.1	3445.1	3480.9	3474.6	3474.6
15°	3116.8	3154.7	3173.6	3196.8	3253.6	3270.4	3291.5	3308.3	3348.3	3344.1	3337.8
17.5°	2933.7	2969.5	2984.2	3003.2	3057.9	3076.8	3093.6	3106.3	3144.2	3142.1	3131.5
20°	2710.6	2742.2	2754.8	2767.4	2815.9	2834.8	2847.4	2860.0	2891.6	2891.6	2876.9
22.5°	2466.5	2493.9	2502.3	2512.8	2554.9	2573.8	2580.1	2590.7	2620.1	2620.1	2601.2
25°	2207.6	2230.8	2235.0	2243.4	2279.2	2296.0	2298.1	2304.5	2333.9	2333.9	2315.0
27.5°	1917.2	1936.2	1940.4	1944.6	1976.1	1993.0	1990.9	2014.0	2022.4	2026.7	2003.5
30°	1591.0	1622.6	1605.8	1624.7	1635.2	1652.0	1645.7	1668.9	1675.2	1681.5	1652.0
32.5°	1224.8	1254.3	1235.4	1254.3	1258.5	1275.3	1266.9	1288.0	1292.2	1298.5	1271.1
35°	858.6	881.8	865.0	871.3	886.0	902.8	892.3	911.3	915.5	917.6	896.5
37.5°	551.4	568.2	572.4	578.7	578.7	591.4	595.6	595.6	597.7	599.8	583.0
40°	330.4	343.0	345.1	343.0	349.4	359.9	362.0	359.9	362.0	364.1	353.6
42.5°	187.3	195.7	197.8	197.8	202.0	208.3	208.3	206.2	208.3	208.3	202.0
45°	103.1	107.3	109.4	107.3	109.4	113.6	113.6	113.6	113.6	113.6	111.5
47.5°	54.7	56.8	56.8	58.9	56.8	58.9	58.9	58.9	61.0	61.0	58.9
50°	29.5	31.6	31.6	31.6	31.6	33.7	33.7	33.7	33.7	33.7	31.6
52.5°	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9
55°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
57.5°	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
60°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
62.5°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
65°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
67.5°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
70°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
72.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
75°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
80°	2.1	2.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P135611

CATALOG NUMBER: LD6A30D010TE ERM6A30840 6LM111LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	3108.4	3108.4	3108.4	3108.4
2.5°	3293.6	3304.1	3289.4	3266.2
5°	3461.9	3474.6	3459.8	3438.8
7.5°	3554.5	3573.5	3556.6	3541.9
10°	3558.7	3577.7	3558.7	3550.3
12.5°	3489.3	3508.2	3487.2	3483.0
15°	3356.7	3371.4	3350.4	3352.5
17.5°	3152.6	3165.2	3144.2	3150.5
20°	2895.8	2908.4	2887.4	2900.0
22.5°	2620.1	2628.5	2624.3	2622.2
25°	2331.8	2338.1	2319.2	2331.8
27.5°	2016.1	2020.3	2022.4	2020.3
30°	1666.8	1668.9	1656.3	1677.3
32.5°	1283.8	1281.7	1277.4	1296.4
35°	902.8	902.8	902.8	919.7
37.5°	587.2	585.1	587.2	599.8
40°	355.7	353.6	355.7	364.1
42.5°	202.0	202.0	204.1	208.3
45°	113.6	111.5	111.5	113.6
47.5°	61.0	61.0	58.9	61.0
50°	33.7	33.7	31.6	33.7
52.5°	18.9	18.9	18.9	18.9
55°	14.7	14.7	14.7	14.7
57.5°	12.6	12.6	12.6	12.6
60°	10.5	10.5	10.5	10.5
62.5°	8.4	8.4	8.4	8.4
65°	6.3	8.4	6.3	6.3
67.5°	6.3	6.3	6.3	6.3
70°	4.2	4.2	4.2	4.2
72.5°	4.2	4.2	4.2	4.2
75°	2.1	2.1	2.1	2.1
77.5°	2.1	2.1	2.1	2.1
80°	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)