

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: P135729

Luminaire Tested: **LD6A30D010TE ERM6A30830 6LM111H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P135729  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23372)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD6A30D010TE ERM6A30830 6LM111H  
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL WASH LUMINAIRE  
SEMI-SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER  
Light Source: (1) HIGH LUMEN LED 3000K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

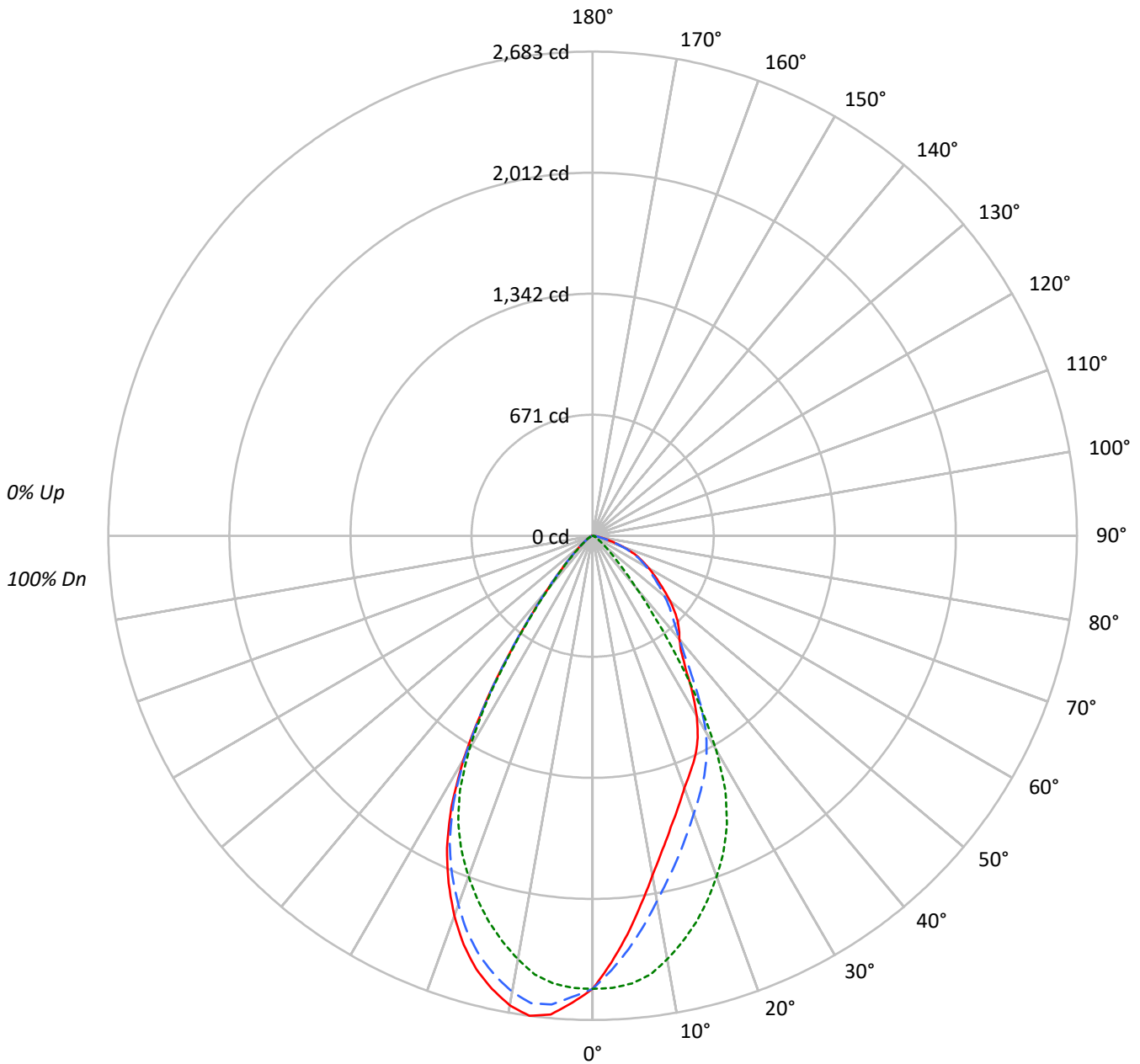
Lumens per Lamp: N/A  
Luminaire Lumens: 2710.0 lumens  
Efficiency: N/A  
Efficacy: 59.7 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 0.96 / 0.92  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 45.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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				20				20	
RC	80				70				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	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91				91
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	84	83				83
3	99	92	86	81	97	90	85	81	88	83	79	85	81	78	83	80	77	75				75
4	93	85	78	73	91	83	77	73	81	76	72	79	75	71	77	73	70	68				68
5	88	78	72	67	86	77	71	66	75	70	66	74	69	65	72	68	64	63				63
6	83	73	66	61	81	72	65	61	70	65	60	69	64	60	67	63	59	58				58
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55	53				53
8	74	63	57	52	73	63	56	52	62	56	52	60	55	51	59	55	51	50				50
9	70	59	53	48	69	59	53	48	58	52	48	57	52	48	56	51	48	46				46
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43				43

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	163806	163806	163806
5°	145119	163089	174373
10°	126492	157820	175038
15°	112991	149666	168004
20°	103169	139452	155469
25°	96885	126730	137448
30°	86874	102928	107546
35°	71385	63707	65340
40°	63653	31332	33070
45°	61411	15620	16700
50°	56594	8292	8891
55°	51139	4982	5312
60°	46856	3432	3432
65°	42823	2702	2254
70°	34526	2232	1679
75°	21350	1462	731
80°	12060	1090	0
85°	6587	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	230.2	8.5
10°-20°	597.9	22.1
20°-30°	760.9	28.1
30°-40°	545.2	20.1
40°-50°	272.0	10.0
50°-60°	164.6	6.1
60°-70°	100.6	3.7
70°-80°	34.7	1.3
80°-90°	3.7	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°	1589.1	58.6
0°-40°	2134.4	78.8
0°-60°	2570.9	94.9
0°-90°	2710.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2710.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2511	2511	2511	2511	2511	
5°	2216	2298	2490	2607	2663	202
15°	1673	1839	2216	2412	2487	471
25°	1346	1466	1760	1874	1909	614
35°	896	966	800	820	820	572
45°	666	622	169	187	181	509
55°	450	423	44	47	47	405
65°	277	269	18	15	15	271
75°	85	76	6	3	3	98
85°	9	6	0	0	0	12
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°	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8
2.5°	2367.7	2370.6	2376.5	2370.6	2373.6	2388.2	2382.3	2385.2	2394.0	2408.6	2399.8
5°	2215.9	2218.8	2233.4	2224.7	2230.5	2248.0	2248.0	2259.7	2277.2	2297.6	2297.6
7.5°	2058.2	2064.1	2078.7	2072.8	2081.6	2105.0	2107.9	2125.4	2148.8	2177.9	2192.5
10°	1909.4	1915.2	1929.8	1926.9	1938.6	1961.9	1973.6	1991.1	2020.3	2055.3	2072.8
12.5°	1783.8	1789.7	1801.3	1801.3	1815.9	1839.3	1851.0	1874.3	1903.5	1941.5	1964.8
15°	1672.9	1681.6	1693.3	1693.3	1707.9	1731.3	1745.9	1766.3	1798.4	1839.3	1865.6
17.5°	1576.5	1579.5	1591.1	1591.1	1605.7	1629.1	1643.7	1664.1	1696.2	1734.2	1763.4
20°	1486.0	1488.9	1500.6	1503.5	1515.2	1535.7	1550.3	1570.7	1599.9	1637.8	1664.1
22.5°	1416.0	1421.8	1430.6	1433.5	1439.3	1459.8	1477.3	1491.9	1518.1	1550.3	1576.5
25°	1345.9	1348.8	1357.6	1360.5	1369.2	1383.8	1395.5	1410.1	1433.5	1465.6	1486.0
27.5°	1261.2	1270.0	1272.9	1275.8	1284.6	1296.3	1307.9	1319.6	1340.1	1366.3	1383.8
30°	1153.2	1156.1	1164.9	1170.7	1179.5	1191.2	1205.8	1217.4	1234.9	1255.4	1267.1
32.5°	1027.7	1030.6	1039.3	1045.2	1059.8	1071.5	1083.1	1091.9	1103.6	1115.3	1115.3
35°	896.3	905.0	908.0	916.7	931.3	943.0	951.8	954.7	960.5	966.4	945.9
37.5°	802.9	808.7	814.5	820.4	832.1	840.8	846.7	846.7	843.7	837.9	811.6
40°	747.4	750.3	756.2	759.1	770.7	776.6	776.6	770.7	759.1	744.5	703.6
42.5°	709.4	712.4	715.3	718.2	724.0	727.0	724.0	712.4	697.8	677.3	630.6
45°	665.6	668.6	671.5	671.5	677.3	677.3	674.4	662.7	645.2	621.9	572.2
47.5°	613.1	616.0	618.9	621.9	624.8	624.8	621.9	610.2	592.7	572.2	519.7
50°	557.6	560.5	563.5	563.5	569.3	569.3	566.4	554.7	540.1	519.7	473.0
52.5°	502.2	505.1	505.1	510.9	510.9	510.9	508.0	496.3	484.6	470.0	426.2
55°	449.6	452.5	452.5	458.4	461.3	458.4	455.4	446.7	435.0	423.3	388.3
57.5°	402.9	405.8	405.8	408.7	411.6	408.7	405.8	400.0	394.1	382.5	353.3
60°	359.1	362.0	362.0	364.9	364.9	362.0	362.0	356.2	350.3	344.5	318.2
62.5°	318.2	318.2	318.2	321.1	321.1	318.2	318.2	312.4	309.5	306.5	286.1
65°	277.4	277.4	277.4	277.4	277.4	271.5	271.5	268.6	265.7	268.6	251.1
67.5°	230.6	230.6	227.7	227.7	227.7	221.9	221.9	221.9	219.0	221.9	207.3
70°	181.0	181.0	178.1	178.1	175.2	169.3	169.3	169.3	166.4	169.3	160.6
72.5°	128.5	131.4	125.5	125.5	122.6	116.8	119.7	116.8	119.7	119.7	113.9
75°	84.7	87.6	81.7	81.7	78.8	75.9	75.9	75.9	78.8	75.9	73.0
77.5°	52.6	55.5	52.6	52.6	49.6	46.7	46.7	46.7	46.7	46.7	43.8
80°	32.1	32.1	32.1	29.2	29.2	26.3	26.3	26.3	26.3	26.3	23.4
82.5°	17.5	17.5	17.5	17.5	17.5	14.6	14.6	14.6	14.6	14.6	11.7
85°	8.8	8.8	8.8	8.8	8.8	5.8	5.8	5.8	5.8	5.8	5.8
87.5°	2.9	2.9	2.9	2.9	2.9	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



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8
2.5°	2426.1	2437.8	2429.0	2464.1	2458.2	2484.5	2481.6	2507.9	2504.9	2507.9	2513.7
5°	2332.7	2356.0	2359.0	2402.8	2405.7	2446.5	2455.3	2490.3	2496.2	2507.9	2522.5
7.5°	2230.5	2265.5	2277.2	2326.8	2344.4	2388.2	2405.7	2452.4	2464.1	2484.5	2502.0
10°	2119.6	2160.4	2177.9	2236.3	2259.7	2309.3	2332.7	2382.3	2399.8	2423.2	2443.6
12.5°	2014.5	2058.2	2081.6	2142.9	2175.0	2224.7	2250.9	2303.5	2321.0	2350.2	2370.6
15°	1915.2	1961.9	1988.2	2049.5	2081.6	2137.1	2163.4	2215.9	2236.3	2265.5	2286.0
17.5°	1813.0	1859.7	1888.9	1947.3	1988.2	2034.9	2064.1	2116.6	2137.1	2163.4	2183.8
20°	1713.7	1760.5	1786.7	1845.1	1883.1	1929.8	1956.1	2008.6	2023.2	2049.5	2067.0
22.5°	1620.3	1664.1	1687.5	1748.8	1780.9	1821.8	1848.0	1894.8	1912.3	1932.7	1944.4
25°	1526.9	1564.9	1582.4	1634.9	1661.2	1699.2	1719.6	1760.5	1778.0	1795.5	1810.1
27.5°	1421.8	1442.2	1448.1	1488.9	1509.4	1544.4	1553.2	1591.1	1605.7	1617.4	1629.1
30°	1290.4	1293.3	1275.8	1296.3	1305.0	1331.3	1331.3	1366.3	1378.0	1386.8	1398.4
32.5°	1124.0	1106.5	1065.6	1059.8	1053.9	1068.5	1062.7	1091.9	1103.6	1109.4	1118.2
35°	940.1	902.1	835.0	808.7	791.2	788.3	779.5	799.9	808.7	814.5	820.4
37.5°	779.5	724.0	639.4	592.7	563.5	551.8	540.1	551.8	557.6	563.5	569.3
40°	662.7	592.7	493.4	435.0	394.1	376.6	362.0	367.9	373.7	379.5	382.5
42.5°	578.1	499.2	391.2	321.1	280.3	259.8	245.2	248.2	251.1	254.0	259.8
45°	513.8	429.2	318.2	242.3	201.4	181.0	169.3	169.3	172.3	175.2	178.1
47.5°	461.3	370.8	259.8	186.8	148.9	128.5	116.8	116.8	119.7	119.7	122.6
50°	411.6	321.1	213.1	146.0	110.9	93.4	84.7	81.7	84.7	84.7	87.6
52.5°	370.8	283.2	178.1	116.8	84.7	70.1	61.3	61.3	61.3	61.3	61.3
55°	332.8	248.2	148.9	93.4	67.1	55.5	46.7	43.8	43.8	43.8	43.8
57.5°	303.6	221.9	128.5	78.8	55.5	43.8	38.0	35.0	35.0	35.0	35.0
60°	274.4	195.6	110.9	64.2	43.8	38.0	32.1	26.3	26.3	26.3	26.3
62.5°	245.2	169.3	93.4	55.5	38.0	29.2	26.3	20.4	20.4	20.4	20.4
65°	213.1	146.0	78.8	43.8	29.2	23.4	20.4	17.5	17.5	14.6	14.6
67.5°	175.2	116.8	64.2	38.0	26.3	20.4	17.5	14.6	11.7	11.7	11.7
70°	134.3	87.6	49.6	29.2	20.4	17.5	11.7	11.7	8.8	8.8	8.8
72.5°	96.3	61.3	35.0	23.4	14.6	11.7	11.7	8.8	8.8	8.8	5.8
75°	61.3	40.9	23.4	14.6	11.7	8.8	8.8	5.8	5.8	5.8	5.8
77.5°	38.0	26.3	17.5	11.7	8.8	5.8	5.8	5.8	2.9	2.9	2.9
80°	20.4	14.6	8.8	5.8	5.8	2.9	2.9	2.9	2.9	2.9	2.9
82.5°	11.7	8.8	5.8	2.9	2.9	2.9	2.9	2.9	0.0	0.0	0.0
85°	5.8	2.9	2.9	2.9	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



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8	2510.8
2.5°	2531.2	2545.8	2537.0	2542.9	2569.2	2557.5	2577.9	2577.9	2601.3	2601.3	2583.8
5°	2548.7	2566.2	2569.2	2577.9	2613.0	2607.1	2630.5	2636.3	2662.6	2668.4	2653.8
7.5°	2537.0	2557.5	2566.2	2580.8	2615.9	2613.0	2639.2	2650.9	2674.3	2683.0	2671.3
10°	2481.6	2504.9	2516.6	2531.2	2569.2	2566.2	2595.4	2610.0	2630.5	2639.2	2630.5
12.5°	2408.6	2434.9	2446.5	2461.1	2499.1	2496.2	2525.4	2540.0	2557.5	2569.2	2560.4
15°	2326.8	2344.4	2364.8	2379.4	2414.4	2411.5	2440.7	2455.3	2469.9	2484.5	2475.7
17.5°	2221.7	2239.3	2259.7	2271.4	2306.4	2306.4	2329.8	2341.4	2361.9	2373.6	2361.9
20°	2102.0	2122.5	2137.1	2145.8	2177.9	2175.0	2198.4	2210.1	2227.6	2236.3	2227.6
22.5°	1976.5	1994.0	2005.7	2011.5	2037.8	2034.9	2052.4	2064.1	2078.7	2087.4	2078.7
25°	1833.4	1845.1	1853.9	1856.8	1880.2	1874.3	1897.7	1897.7	1909.4	1918.1	1909.4
27.5°	1649.5	1658.3	1664.1	1661.2	1678.7	1670.0	1690.4	1675.8	1699.2	1705.0	1696.2
30°	1413.0	1418.9	1424.7	1413.0	1424.7	1413.0	1430.6	1410.1	1430.6	1439.3	1430.6
32.5°	1132.8	1132.8	1138.6	1124.0	1129.8	1118.2	1126.9	1121.1	1126.9	1135.7	1126.9
35°	832.1	832.1	837.9	829.1	832.1	820.4	826.2	820.4	823.3	829.1	826.2
37.5°	578.1	575.1	583.9	578.1	581.0	575.1	578.1	572.2	575.1	578.1	575.1
40°	391.2	391.2	397.1	394.1	397.1	394.1	397.1	394.1	394.1	394.1	391.2
42.5°	262.8	265.7	268.6	268.6	271.5	268.6	271.5	268.6	268.6	268.6	265.7
45°	181.0	181.0	183.9	183.9	186.8	186.8	186.8	183.9	183.9	183.9	183.9
47.5°	125.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	128.5	125.5
50°	87.6	90.5	90.5	90.5	90.5	90.5	90.5	87.6	87.6	87.6	87.6
52.5°	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	61.3	61.3
55°	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7
57.5°	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
60°	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3
62.5°	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4
65°	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
67.5°	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
70°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
72.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
75°	5.8	5.8	5.8	5.8	5.8	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
80°	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	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: P135729

CATALOG NUMBER: LD6A30D010TE ERM6A30830 6LM111H

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	2510.8	2510.8	2510.8	2510.8
2.5°	2575.0	2598.4	2589.6	2589.6
5°	2645.1	2671.3	2665.5	2662.6
7.5°	2665.5	2688.9	2683.0	2683.0
10°	2624.6	2648.0	2642.2	2642.2
12.5°	2557.5	2577.9	2575.0	2572.1
15°	2472.8	2493.3	2490.3	2487.4
17.5°	2359.0	2382.3	2379.4	2376.5
20°	2221.7	2242.2	2242.2	2239.3
22.5°	2072.8	2087.4	2090.4	2084.5
25°	1903.5	1915.2	1915.2	1909.4
27.5°	1690.4	1699.2	1699.2	1696.2
30°	1427.6	1430.6	1433.5	1427.6
32.5°	1121.1	1121.1	1126.9	1121.1
35°	817.5	817.5	823.3	820.4
37.5°	569.3	569.3	572.2	569.3
40°	388.3	388.3	391.2	388.3
42.5°	265.7	262.8	265.7	265.7
45°	181.0	181.0	183.9	181.0
47.5°	125.5	125.5	125.5	125.5
50°	87.6	87.6	87.6	87.6
52.5°	61.3	61.3	61.3	61.3
55°	43.8	46.7	46.7	46.7
57.5°	32.1	35.0	35.0	35.0
60°	26.3	26.3	26.3	26.3
62.5°	20.4	20.4	20.4	20.4
65°	14.6	14.6	14.6	14.6
67.5°	11.7	11.7	11.7	11.7
70°	8.8	8.8	8.8	8.8
72.5°	5.8	5.8	5.8	5.8
75°	2.9	2.9	2.9	2.9
77.5°	2.9	2.9	2.9	2.9
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)