

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: P1192088

Luminaire Tested: **LDA6A25940D010TE LARL15SP 6LAL1 30° Tilt**

Issue Date: 3/3/2020

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-41-14
Report Number: P1192088
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26267)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A25940D010TE LARL15SP 6LAL1 30° Tilt
Description: PORTFOLIO 6" Lensed Adjustable, Self-flange Trim Ring, 15° Spot
Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

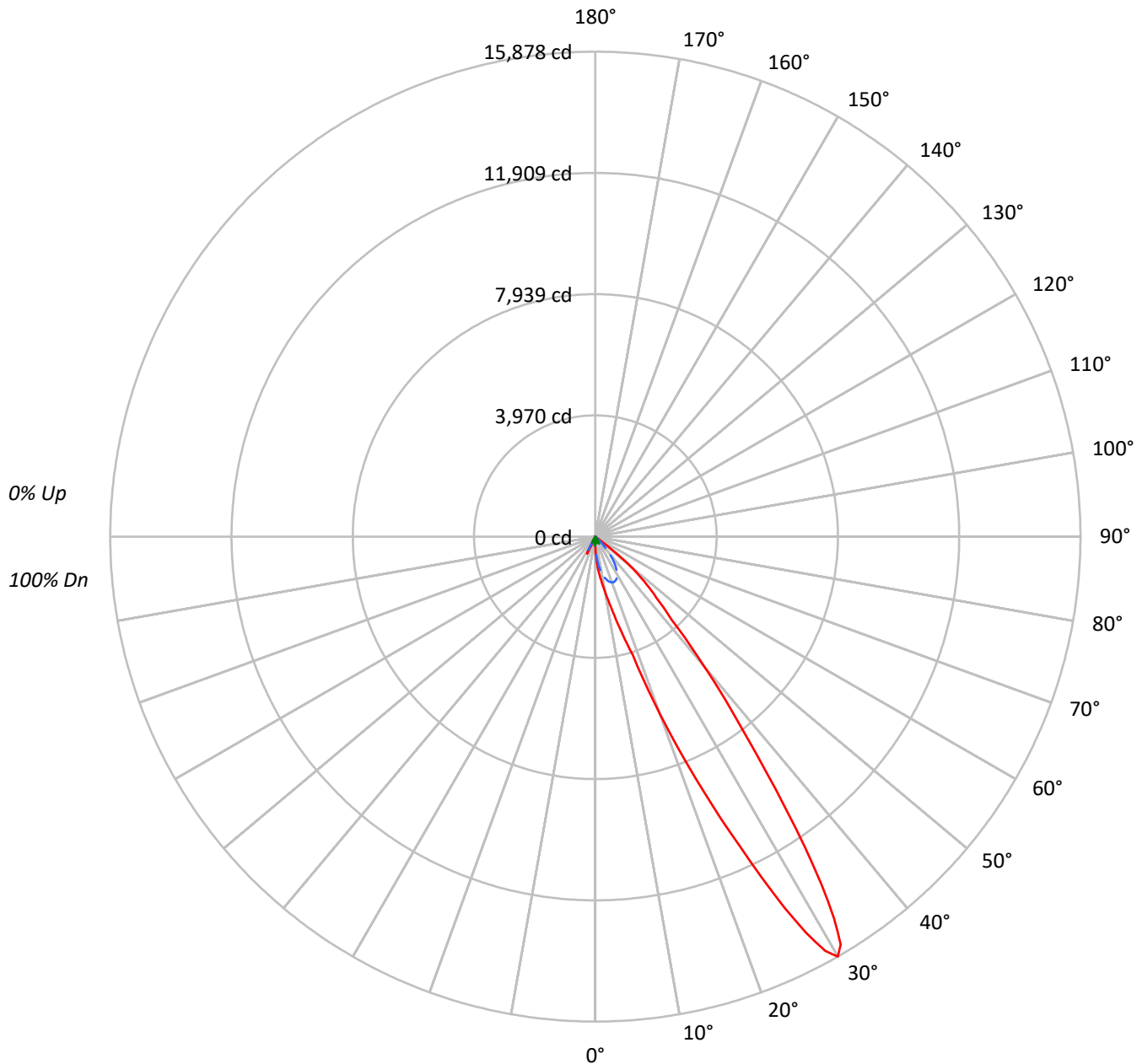
Lumens per Lamp: N/A
Luminaire Lumens: 2197.2 lumens
Efficiency: N/A
Efficacy: 70.4 lumens/watt
Spacing Criteria (0/90/45): 2.44 / 0.33 / 1.32
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	113	109	106	104	110	107	105	102	103	101	99	99	98	96	96	95	93	91		
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	85	83		
3	99	91	86	81	97	90	85	80	87	83	79	85	81	78	82	79	76	75		
4	93	84	77	72	91	82	76	72	80	75	71	78	74	70	76	72	69	67		
5	87	77	70	64	85	76	69	64	74	68	64	72	67	63	70	66	62	61		
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55		
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49		
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45		
9	66	55	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	41		
10	62	50	43	39	61	50	43	39	49	43	39	48	42	38	47	42	38	37		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	17723	17723	17723
5°	60632	15073	2014
10°	101473	8372	991
15°	176261	3087	840
20°	360111	2024	1447
25°	675977	3950	25550
30°	1005066	6881	4134
35°	725332	529	328
40°	393967	215	0
45°	218689	233	0
50°	127962	256	0
55°	4072	182	0
60°	1403	329	0
65°	636	389	0
70°	481	481	0
75°	233	826	0
80°	0	1231	0
85°	0	2453	0

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.3	2.1
10°-20°	235.3	10.7
20°-30°	757.1	34.5
30°-40°	788.2	35.9
40°-50°	335.8	15.3
50°-60°	27.9	1.3
60°-70°	2.9	0.1
70°-80°	2.5	0.1
80°-90°	2.3	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°	1037.7	47.2
0°-40°	1825.9	83.1
0°-60°	2189.5	99.7
0°-90°	2197.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2197.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	323	323	323	323	323	
5°	1102	803	274	49	37	125
15°	3106	1479	54	19	15	1015
25°	11176	1575	65	197	422	5367
35°	10838	1124	8	7	5	6710
45°	2821	193	3	2	0	2320
55°	43	6	2	2	0	266
65°	5	3	3	2	0	6
75°	1	3	4	3	0	1
85°	0	3	4	3	0	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	323.3	323.3	323.3	323.3	323.3	323.3	323.3	323.3	323.3	323.3	323.3
2.5°	718.1	680.5	709.1	692.4	681.5	678.5	695.2	676.6	656.7	655.8	649.9
5°	1101.8	1066.3	1095.8	1070.1	1058.4	1048.5	1056.2	1025.6	993.1	994.0	979.2
7.5°	1436.1	1416.4	1436.1	1408.4	1399.5	1389.6	1386.6	1357.1	1318.4	1321.4	1298.7
10°	1822.9	1765.6	1797.1	1736.9	1721.9	1695.2	1686.4	1637.8	1576.6	1573.6	1540.9
12.5°	2356.0	2333.3	2364.9	2279.8	2262.0	2216.5	2191.8	2114.6	2013.8	1988.1	1912.8
15°	3105.7	3032.6	3064.2	2944.4	2910.8	2831.7	2777.3	2657.7	2561.6	2452.9	2338.2
17.5°	4058.2	4016.7	4057.1	3821.8	3734.7	3580.4	3452.8	3253.0	3049.3	2951.5	2790.1
20°	6172.8	5975.1	5996.7	5559.5	5280.7	4865.2	4532.8	4091.8	3687.2	3454.8	3188.8
22.5°	8519.8	8294.4	8239.0	7677.1	7204.4	6580.2	5996.7	5258.9	4541.8	4022.5	3571.6
25°	11175.5	11029.2	10739.4	9819.5	9006.6	8116.4	7257.9	6292.4	5362.7	4567.5	3891.1
26°	12436.5	12318.9	11883.6	10733.4	9681.1	8615.8	7634.7	6598.2	5595.2	4722.8	3966.2
27°	13634.4	13539.4	12973.6	11634.5	10319.0	9037.2	7908.6	6815.6	5762.4	4822.8	4019.7
28°	14689.8	14592.8	13861.9	12398.0	10824.4	9341.7	8080.7	6951.3	5858.2	4846.5	4016.7
29°	15510.6	15388.0	14444.4	12887.6	11121.2	9488.2	8115.3	6968.0	5844.3	4791.1	3961.3
30°	15877.6	15725.3	14610.6	12992.5	11126.1	9432.8	8017.4	6878.1	5731.8	4660.6	3858.3
31°	15589.8	15460.1	14308.9	12689.9	10824.4	9179.5	7774.1	6670.3	5518.0	4471.6	3721.8
32°	14751.0	14632.2	13571.1	12025.1	10253.7	8751.3	7421.0	6373.5	5234.2	4243.1	3563.7
33°	13600.8	13508.8	12557.2	11112.2	9520.8	8224.1	6998.8	6001.6	4893.0	3986.9	3370.7
34°	12288.2	12216.1	11347.6	10080.6	8720.7	7638.6	6517.1	5466.6	4520.0	3728.9	3226.4
35°	10838.3	10788.8	10080.6	9021.3	7924.5	7030.2	5981.9	4993.8	4144.2	3480.5	3071.1
36°	9460.5	9420.0	8879.9	8050.1	7166.8	6399.2	5402.3	4501.3	3784.1	3257.0	2925.6
37°	8283.5	8253.8	7854.3	7185.6	6438.8	5743.5	4811.9	4040.4	3470.6	3062.1	2776.2
38°	7304.3	7280.6	6956.2	6363.7	5689.2	5065.0	4242.2	3632.8	3203.6	2893.1	2607.2
39°	6391.5	6360.7	6069.0	5532.8	4942.4	4404.4	3864.3	3297.5	2993.9	2717.0	2425.3
40°	5505.2	5465.6	5209.4	4753.4	4260.9	3843.6	3358.9	3091.9	2823.7	2512.2	2239.3
42.5°	3694.2	3672.4	3532.9	3327.2	3118.6	2966.2	2812.8	2574.6	2291.8	2034.6	1832.8
45°	2820.8	2815.8	2747.6	2639.9	2501.3	2372.9	2168.1	2030.5	1839.6	1623.1	1478.6
47.5°	2164.0	2165.1	2101.8	2020.7	1925.7	1842.6	1693.3	1583.5	1447.0	1323.3	1211.6
50°	1500.4	1437.1	1446.1	1381.7	1304.6	1256.1	1117.6	1033.5	839.7	643.9	503.5
51°	1124.5	1041.5	1052.4	980.2	900.0	857.5	728.0	642.8	460.9	302.6	197.7
52°	686.5	621.2	620.1	564.7	495.6	457.9	355.0	276.9	157.3	83.0	57.4
53°	307.5	264.1	254.2	216.6	170.1	147.4	100.8	74.2	55.4	42.6	32.7
54°	81.1	72.1	69.3	63.3	57.4	55.4	48.4	40.6	31.7	24.8	20.8
55°	42.6	39.6	38.5	36.6	33.6	32.7	28.7	24.8	19.7	17.8	15.8
57.5°	19.7	19.7	18.8	17.8	16.9	16.9	14.8	13.9	12.8	12.8	10.9
60°	12.8	12.8	12.8	11.8	11.8	10.9	9.9	9.0	7.9	9.0	7.9
61°	10.9	10.9	10.9	9.9	9.0	7.9	7.9	7.9	6.9	6.9	6.0
62°	7.9	7.9	6.9	6.9	6.0	6.0	6.0	6.0	4.9	6.0	6.0
63°	6.0	6.0	4.9	4.9	4.9	4.9	3.9	3.9	3.9	6.0	6.0
64°	4.9	4.9	4.9	3.9	3.9	3.9	3.9	3.9	3.9	4.9	3.9
65°	4.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.0	3.9	3.9
66°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.0	3.0	3.9	3.9



TEST NUMBER: P1192088

CATALOG NUMBER: LDA6A25940D010TE LARL15SP 6LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
72.5°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	1.1	1.1
75°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
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: P1192088

CATALOG NUMBER: LDA6A25940D010TE LARL15SP 6LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	323.3	323.3	323.3	323.3	323.3	323.3	323.3	323.3	323.3	323.3	323.3
2.5°	649.9	637.9	613.3	608.3	584.6	570.7	574.6	566.8	440.2	310.5	193.9
5°	968.3	941.5	904.9	892.1	851.6	829.8	823.0	803.1	545.0	273.9	91.0
7.5°	1279.8	1245.2	1200.7	1179.9	1124.5	1087.9	1064.2	1034.6	617.1	217.6	50.5
10°	1511.4	1471.8	1425.3	1398.6	1336.3	1299.7	1261.0	1228.5	655.8	150.4	37.6
12.5°	1819.9	1741.8	1644.9	1586.5	1494.5	1444.0	1399.5	1367.8	670.6	90.1	28.7
15°	2231.4	2105.8	1968.2	1862.5	1706.1	1611.3	1536.0	1478.6	658.7	54.4	24.8
17.5°	2629.9	2451.8	2271.9	2128.5	1949.4	1808.0	1663.7	1550.9	608.3	43.5	22.7
20°	2961.3	2752.7	2523.1	2322.4	2115.7	1947.5	1755.5	1596.3	527.2	34.7	24.8
22.5°	3216.4	2950.4	2690.2	2441.1	2194.8	2001.8	1791.3	1606.2	424.3	35.5	34.7
25°	3400.4	3051.2	2774.3	2490.5	2222.4	2010.8	1772.4	1574.7	312.6	65.3	116.6
26°	3438.1	3072.0	2785.2	2485.6	2212.6	1996.0	1750.6	1554.8	281.8	129.7	257.2
27°	3458.8	3069.2	2777.3	2465.7	2191.8	1974.2	1726.0	1537.0	276.9	221.5	383.7
28°	3440.0	3044.4	2743.7	2430.2	2158.2	1945.5	1697.3	1516.3	273.9	272.0	364.0
29°	3388.6	3000.9	2693.2	2374.8	2106.7	1900.0	1653.7	1486.6	245.2	216.6	219.6
30°	3310.3	2939.5	2620.0	2300.5	2041.4	1834.7	1591.4	1439.1	162.2	108.7	92.9
31°	3213.4	2860.3	2530.1	2214.5	1967.4	1755.5	1526.1	1377.8	84.1	46.4	43.5
32°	3106.6	2765.5	2433.2	2127.4	1892.1	1679.4	1471.8	1323.3	55.4	25.7	24.8
33°	2993.9	2654.7	2326.2	2037.5	1808.0	1594.4	1415.3	1265.1	41.5	15.8	14.8
34°	2883.2	2535.9	2218.6	1940.6	1717.0	1518.2	1363.9	1197.7	33.6	11.8	9.9
35°	2757.6	2407.3	2107.7	1837.7	1619.2	1453.0	1312.6	1124.5	26.7	7.9	7.9
36°	2611.2	2271.0	1993.0	1729.9	1526.1	1392.6	1256.1	1044.5	20.8	6.0	6.9
37°	2455.9	2135.4	1877.3	1623.1	1450.0	1337.2	1187.8	962.3	17.8	4.9	6.0
38°	2295.6	2001.0	1752.5	1520.2	1383.6	1276.9	1110.8	877.3	14.8	3.9	4.9
39°	2138.3	1863.4	1628.0	1437.1	1321.4	1205.6	1022.6	790.2	12.8	3.9	4.9
40°	1985.1	1724.9	1517.2	1365.0	1252.2	1118.7	931.7	699.3	9.0	3.0	4.9
42.5°	1621.1	1438.2	1306.6	1154.2	1026.7	876.3	685.4	454.1	6.9	3.0	3.9
45°	1357.1	1206.7	1053.4	881.2	755.6	601.3	405.5	192.8	6.9	3.0	3.9
47.5°	1073.1	896.2	670.6	453.0	295.7	152.3	47.5	26.7	4.9	3.0	3.9
50°	312.6	181.0	67.2	40.6	30.6	18.8	11.8	10.9	3.9	3.0	3.9
51°	90.1	53.5	35.5	23.7	17.8	10.9	9.0	9.9	3.9	3.0	3.0
52°	42.6	30.6	20.8	15.8	11.8	9.0	7.9	9.0	3.9	3.0	3.0
53°	24.8	18.8	14.8	12.8	9.0	7.9	6.0	7.9	3.9	3.0	3.0
54°	16.9	14.8	12.8	10.9	7.9	6.0	6.0	7.9	3.9	3.0	3.0
55°	14.8	12.8	10.9	9.9	6.9	6.0	6.0	6.0	3.0	1.9	3.0
57.5°	9.9	9.9	7.9	7.9	6.0	3.9	1.9	4.9	3.9	3.0	3.0
60°	6.9	6.9	6.9	4.9	1.9	1.9	1.1	3.9	3.9	3.0	3.9
61°	6.9	6.9	4.9	3.9	1.9	1.9	1.1	3.9	3.9	3.0	3.9
62°	6.0	4.9	3.9	3.9	1.9	1.9	1.1	3.9	3.9	3.0	3.9
63°	4.9	3.9	3.9	3.9	1.9	1.1	1.1	3.9	3.9	3.0	3.9
64°	3.9	3.9	3.9	3.9	1.1	1.1	1.1	3.9	3.9	3.0	3.9
65°	3.9	3.9	3.9	3.0	1.1	1.1	1.1	3.0	3.9	3.0	3.9
66°	3.9	3.9	3.0	3.0	1.1	1.1	1.1	3.0	3.9	3.0	3.9

Classified

Scaled Data Report

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CATALOG NUMBER: LDA6A25940D010TE LARL15SP 6LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
72.5°	1.1	1.9	1.9	1.9	0.0	0.0	0.0	3.0	3.9	3.0	3.9
75°	1.1	1.1	1.9	1.9	0.0	0.0	0.0	3.0	3.9	3.9	3.9
77.5°	1.1	1.1	1.9	1.9	0.0	0.0	0.0	3.0	3.9	3.9	4.9
80°	1.1	1.1	1.9	1.9	0.0	0.0	0.0	3.0	3.9	3.9	4.9
82.5°	1.1	1.1	1.9	1.9	0.0	0.0	0.0	3.0	3.9	3.9	4.9
85°	1.1	1.1	1.9	1.9	0.0	0.0	0.0	3.0	3.9	3.9	4.9
87.5°	1.1	1.1	1.9	1.9	0.0	0.0	0.0	3.0	3.9	3.9	4.9
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: P1192088

CATALOG NUMBER: LDA6A25940D010TE LARL15SP 6LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	323.3	323.3	323.3
2.5°	123.7	89.0	81.1
5°	49.4	40.6	36.6
7.5°	30.6	25.7	23.7
10°	24.8	18.8	17.8
12.5°	19.7	16.9	15.8
15°	18.8	15.8	14.8
17.5°	18.8	17.8	16.9
20°	23.7	23.7	24.8
22.5°	40.6	47.5	53.5
25°	196.9	318.4	422.4
26°	412.4	581.6	622.1
27°	511.4	529.2	508.4
28°	393.7	353.1	332.3
29°	210.8	176.1	161.1
30°	84.1	69.3	65.3
31°	40.6	34.7	33.6
32°	22.7	18.8	18.8
33°	13.9	11.8	10.9
34°	9.9	7.9	6.9
35°	6.9	6.0	4.9
36°	6.0	3.9	3.0
37°	4.9	3.0	3.0
38°	3.9	3.0	1.9
39°	3.0	1.9	1.1
40°	3.0	1.1	0.0
42.5°	1.9	1.1	0.0
45°	1.9	0.0	0.0
47.5°	3.0	1.9	1.1
50°	1.9	1.1	0.0
51°	1.9	0.0	0.0
52°	1.9	0.0	0.0
53°	1.9	0.0	0.0
54°	1.9	0.0	0.0
55°	1.9	0.0	0.0
57.5°	1.9	0.0	0.0
60°	1.9	0.0	0.0
61°	1.9	0.0	0.0
62°	1.9	0.0	0.0
63°	1.9	1.1	0.0
64°	1.9	1.1	0.0
65°	1.9	1.1	0.0
66°	1.9	1.1	0.0



TEST NUMBER: P1192088

CATALOG NUMBER: LDA6A25940D010TE LARL15SP 6LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
72.5°	3.0	1.1	0.0
75°	3.0	1.1	0.0
77.5°	3.0	1.1	0.0
80°	3.0	1.1	0.0
82.5°	3.0	1.1	0.0
85°	3.0	1.1	0.0
87.5°	3.0	1.1	0.0
90°	0.0	0.0	0.0

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Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



Report Generated By 670245859 / DESKTOP-T8S5UU9

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— 0°-180° - - 45°-225° - - - 90°-270°

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67.5°	3.9	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	3.0
70°	3.0	3.0	3.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9

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67.5°	3.0	3.0	3.0	3.0	1.1	0.0	0.0	3.0	3.9	3.0	3.9
70°	1.9	1.9	1.9	1.9	0.0	0.0	0.0	3.0	3.9	3.0	3.9

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67.5°	3.0	1.1	0.0
70°	3.0	1.1	0.0

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(END OF REPORT)