

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: P1192097

Luminaire Tested: **LDA6A25950D010TE LARL20NF 6LAL1 30° Tilt**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1192097
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26268)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A25950D010TE LARL20NF 6LAL1 30° Tilt
Description: PORTFOLIO 6" Lensed Adjustable, Self-flange Trim Ring, 20° Narrow Flood Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

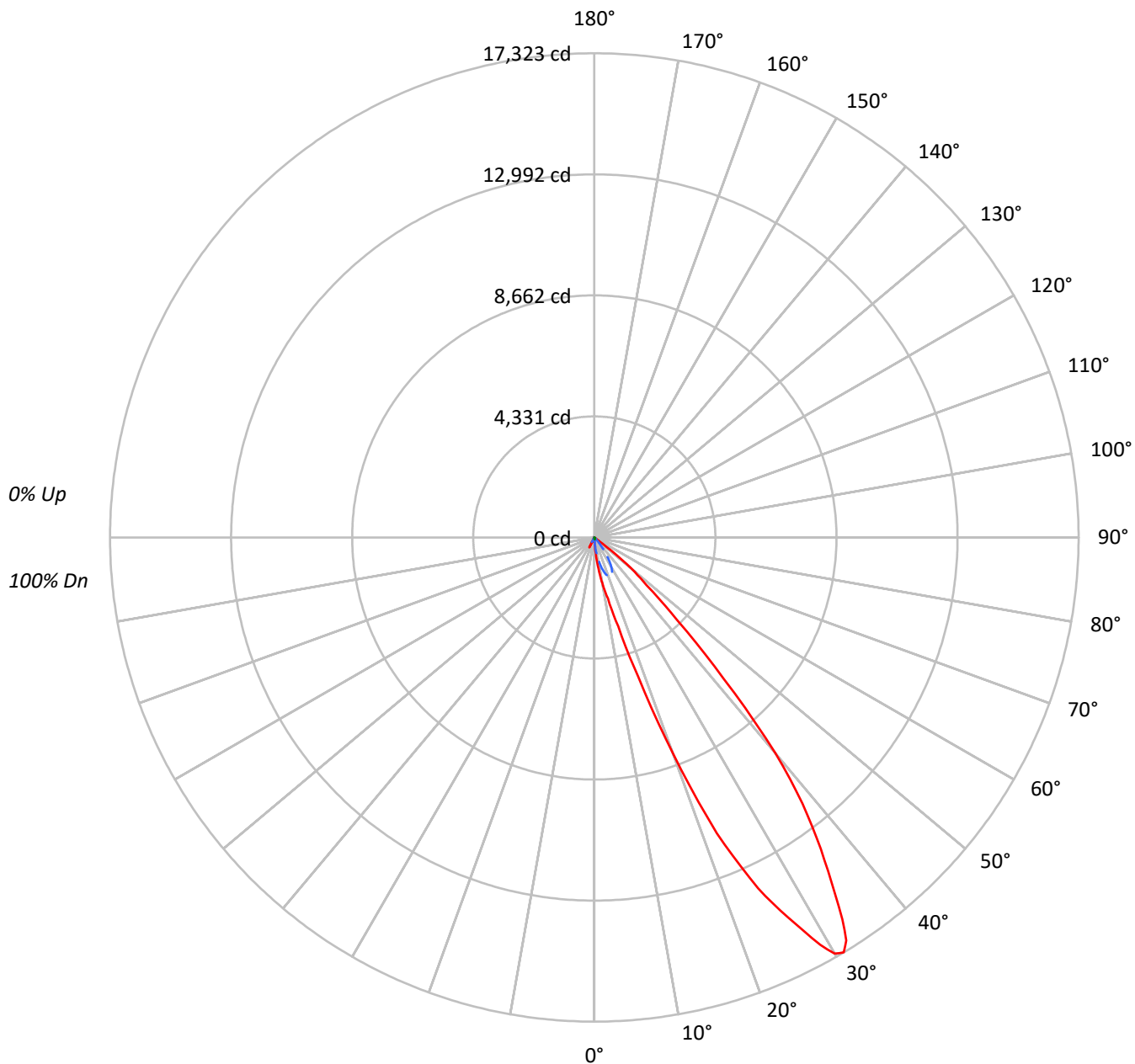
Lumens per Lamp: N/A
Luminaire Lumens: 2638.9 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 2.7 / 0.43 / 1.35
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1192097

CATALOG NUMBER: LDA6A25950D010TE LARL20NF 6LAL1 30° Tilt

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1192097

CATALOG NUMBER: LDA6A25950D010TE LARL20NF 6LAL1 30° Tilt

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	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91		
2	105	100	95	91	103	98	93	90	94	91	88	91	88	86	89	86	84	82		
3	99	91	85	80	96	89	84	79	87	82	78	84	80	77	82	78	76	74		
4	92	83	76	71	90	82	75	70	79	74	70	77	72	69	75	71	68	66		
5	86	75	68	63	84	74	68	63	73	67	62	71	66	62	69	65	61	59		
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53		
7	74	63	56	50	73	62	55	50	61	55	50	59	54	50	58	53	49	48		
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	44	43		
9	65	53	46	41	63	52	45	41	51	45	40	50	44	40	49	44	40	39		
10	60	49	41	37	59	48	41	37	47	41	37	46	41	36	45	40	36	35		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3273	3273	3273
5°	31747	2889	1189
10°	93886	2054	740
15°	186346	1396	641
20°	480708	1143	898
25°	837774	1373	6472
30°	1088237	1437	3646
35°	975096	629	341
40°	720879	222	0
45°	324646	240	0
50°	146451	264	0
55°	13084	296	0
60°	1590	340	0
65°	662	532	0
70°	497	657	0
75°	0	868	0
80°	0	1294	347
85°	0	2579	692



TEST NUMBER: P1192097

CATALOG NUMBER: LDA6A25950D010TE LARL20NF 6LAL1 30° Tilt

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.8	0.9
10°-20°	222.2	8.4
20°-30°	877.4	33.2
30°-40°	1058.8	40.1
40°-50°	410.9	15.6
50°-60°	36.1	1.4
60°-70°	3.4	0.1
70°-80°	3.3	0.1
80°-90°	3.0	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°	1123.4	42.6
0°-40°	2182.2	82.7
0°-60°	2629.2	99.6
0°-90°	2638.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2638.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	60	60	60	60	60	
5°	577	282	52	26	22	92
15°	3283	1242	25	15	11	1203
25°	13850	1470	23	72	107	6334
35°	14570	748	9	9	5	8956
45°	4188	52	3	2	0	3679
55°	137	6	3	2	0	330
65°	5	4	4	3	0	6
75°	0	4	4	4	0	1
85°	0	4	4	4	1	0
90°	0	0	0	0	0	

TEST NUMBER: P1192097

CATALOG NUMBER: LDA6A25950D010TE LARL20NF 6LAL1 30° Tilt

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7
2.5°	187.2	177.8	167.5	171.8	173.8	179.0	174.7	159.3	168.7	161.4	155.4
5°	576.9	566.6	547.0	550.2	543.9	551.3	534.8	501.9	508.0	497.6	470.9
7.5°	1125.1	1081.8	1050.0	1052.1	1033.6	1041.8	1010.9	954.3	948.1	895.5	887.3
10°	1686.6	1664.9	1626.9	1621.8	1588.8	1592.9	1544.5	1469.5	1448.8	1388.3	1353.4
12.5°	2237.6	2201.6	2148.1	2136.8	2083.3	2084.5	2018.6	1934.3	1903.5	1840.8	1792.4
15°	3283.4	3232.0	3109.6	3063.3	2915.3	2892.6	2730.1	2539.0	2446.4	2338.4	2196.5
17.5°	5213.6	5180.7	4941.0	4808.3	4508.2	4209.9	4034.1	3620.8	3379.1	3076.6	2814.4
20°	8240.0	8300.8	7882.2	7585.9	7028.6	6399.2	5955.0	5202.3	4699.6	4178.1	3684.4
22.5°	11458.6	11484.4	11055.5	10686.3	10037.6	9172.7	8149.4	7236.2	6314.9	5419.2	4604.9
25°	13850.4	13776.6	13304.5	12861.2	12178.4	11295.0	10300.7	9081.3	7821.3	6591.5	5398.7
26°	14580.7	14540.6	14067.5	13536.8	12785.2	11888.3	10854.0	9623.1	8292.4	6967.9	5641.4
27°	15257.2	15231.6	14718.4	14128.2	13286.0	12347.1	11264.3	10034.4	8648.1	7259.0	5817.2
28°	15943.2	15914.4	15293.3	14608.5	13693.2	12673.1	11548.1	10308.9	8877.6	7429.7	5890.2
29°	16668.1	16612.6	15818.7	14961.0	13964.6	12863.3	11696.0	10434.4	8955.8	7471.8	5871.7
30°	17191.5	17105.1	16198.2	15184.2	14075.7	12923.0	11712.6	10431.3	8907.4	7384.4	5753.6
31°	17323.2	17235.8	16304.2	15181.1	13994.4	12832.5	11594.3	10285.3	8705.8	7172.6	5553.9
32°	17004.3	16924.2	16035.8	14834.6	13737.4	12614.6	11358.9	10014.9	8393.1	6855.9	5283.5
33°	16292.7	16232.0	15465.9	14379.0	13369.3	12305.0	11021.5	9630.3	7948.9	6452.8	4965.7
34°	15395.0	15350.9	14761.6	13843.3	12902.3	11880.1	10584.6	9123.3	7363.8	5996.1	4619.2
35°	14570.4	14537.4	14060.3	13245.8	12368.6	11354.7	10031.3	8499.1	6761.2	5504.5	4249.0
36°	13776.6	13748.7	13334.4	12577.4	11731.2	10738.8	9335.1	7752.6	6114.4	4994.6	3865.4
37°	12947.7	12923.0	12567.2	11847.4	11014.4	10002.4	8508.3	6957.6	5457.3	4485.6	3471.6
38°	12088.0	12067.3	11741.5	11023.7	10178.5	9102.8	7565.4	6135.9	4816.7	3988.9	3117.8
39°	11128.5	11110.9	10810.8	10058.0	9155.1	8042.5	6594.6	5334.9	4209.0	3506.6	2775.6
40°	10073.4	10049.8	9749.6	8908.3	7996.2	6951.4	5661.9	4599.6	3635.0	3056.1	2474.2
42.5°	6848.6	6822.9	6599.7	6110.3	5232.1	4560.6	3752.3	3078.8	2575.9	2227.4	1927.1
45°	4187.5	4190.4	4073.3	3770.8	3242.2	2869.0	2429.9	2108.1	1881.8	1748.1	1539.4
47.5°	2532.7	2532.7	2480.4	2326.2	2088.5	1939.4	1757.3	1607.3	1434.6	1302.8	1076.7
50°	1717.2	1718.4	1638.0	1646.3	1488.0	1395.5	1221.6	1038.6	868.9	677.7	483.4
51°	1271.0	1277.2	1203.2	1237.0	1063.4	985.1	820.6	665.3	515.2	367.2	211.8
52°	777.4	788.7	738.4	769.2	668.3	554.2	420.6	310.4	208.7	146.0	101.7
53°	361.0	370.1	344.6	359.0	299.3	233.5	176.9	144.0	115.1	93.5	69.0
54°	191.2	193.4	185.1	181.0	164.5	144.9	120.4	99.7	78.1	62.7	46.3
55°	136.9	136.9	132.6	128.6	115.1	98.8	80.2	67.9	51.4	41.2	29.8
57.5°	42.1	42.1	42.1	40.0	34.9	29.8	23.6	20.5	16.4	15.4	12.3
60°	14.5	14.5	14.5	13.3	12.3	11.3	10.3	9.4	8.2	8.2	7.2
61°	10.3	10.3	10.3	10.3	9.4	9.4	8.2	7.2	6.2	7.2	6.2
62°	8.2	9.4	8.2	8.2	8.2	7.2	6.2	6.2	5.1	6.2	5.1
63°	7.2	7.2	7.2	7.2	6.2	6.2	5.1	5.1	4.1	5.1	5.1
64°	6.2	6.2	6.2	6.2	5.1	5.1	4.1	4.1	3.1	4.1	4.1
65°	5.1	5.1	5.1	5.1	4.1	4.1	4.1	3.1	3.1	4.1	4.1
66°	4.1	4.1	4.1	4.1	4.1	3.1	3.1	3.1	2.0	3.1	3.1

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1192097

CATALOG NUMBER: LDA6A25950D010TE LARL20NF 6LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
72.5°	2.0	2.0	2.0	2.0	1.1	1.1	1.1	1.1	1.1	2.0	2.0
75°	0.0	0.0	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

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1192097

CATALOG NUMBER: LDA6A25950D010TE LARL20NF 6LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7
2.5°	149.1	138.8	136.9	136.9	115.1	119.3	112.1	107.0	75.0	57.6	43.2
5°	455.5	418.6	403.1	389.7	331.1	326.0	290.0	281.7	100.8	52.5	33.0
7.5°	849.5	792.8	756.9	722.0	627.2	601.5	539.9	524.4	136.9	44.3	25.8
10°	1297.7	1216.5	1153.8	1070.5	948.1	894.7	804.1	771.2	166.7	36.9	24.6
12.5°	1719.3	1626.9	1541.5	1431.5	1265.9	1180.5	1061.2	1019.1	177.8	30.9	22.7
15°	2083.3	1960.1	1854.1	1735.8	1550.7	1442.8	1296.7	1242.3	168.7	24.6	19.6
17.5°	2545.2	2336.4	2152.4	1986.8	1785.2	1653.6	1483.8	1395.5	136.9	21.6	17.6
20°	3228.0	2807.4	2483.3	2216.0	1936.3	1772.9	1584.6	1477.7	98.8	19.6	17.6
22.5°	3870.7	3270.1	2773.3	2391.0	2014.6	1819.2	1623.8	1505.4	69.9	19.6	20.5
25°	4395.0	3618.6	2973.9	2506.0	2057.7	1828.3	1609.3	1469.5	54.5	22.7	40.0
26°	4542.2	3705.1	3013.0	2515.3	2051.5	1815.0	1584.6	1436.6	48.3	30.9	75.0
27°	4633.6	3744.1	3014.1	2500.9	2028.8	1788.3	1547.6	1392.4	42.1	47.4	126.5
28°	4652.1	3725.6	2979.2	2460.8	1989.8	1752.2	1506.5	1338.9	39.1	59.7	144.0
29°	4601.8	3659.8	2915.3	2402.1	1942.5	1709.0	1457.1	1280.3	33.8	45.2	93.5
30°	4488.5	3550.9	2821.8	2327.1	1892.2	1660.8	1396.5	1210.2	27.8	22.7	42.1
31°	4318.9	3400.7	2706.5	2238.7	1835.6	1599.1	1323.5	1132.1	23.6	15.4	24.6
32°	4103.9	3220.7	2578.1	2148.1	1771.7	1524.0	1238.1	1044.7	21.6	12.3	20.5
33°	3857.2	3031.5	2445.5	2056.7	1695.7	1434.6	1146.6	951.2	19.6	13.3	20.5
34°	3587.9	2838.3	2295.3	1960.9	1607.3	1336.9	1048.9	841.3	17.6	12.3	15.4
35°	3295.9	2637.8	2160.6	1876.6	1507.6	1230.9	949.2	747.6	15.4	9.4	10.3
36°	3043.9	2442.3	2030.0	1769.8	1398.6	1122.0	846.4	646.8	13.3	6.2	7.2
37°	2769.3	2259.2	1908.6	1658.7	1281.3	1009.7	743.6	547.0	12.3	4.1	6.2
38°	2513.2	2090.5	1787.1	1531.2	1161.1	896.7	638.6	449.4	11.3	4.1	5.1
39°	2280.8	1937.4	1674.1	1395.5	1034.5	778.5	532.6	352.8	10.3	3.1	5.1
40°	2081.4	1800.6	1538.4	1252.6	903.9	661.2	426.8	261.2	9.4	3.1	5.1
42.5°	1692.6	1444.9	1161.1	885.4	585.1	374.3	191.2	95.7	7.2	3.1	4.1
45°	1293.8	1028.2	766.1	532.6	301.3	144.9	71.0	52.5	6.2	3.1	4.1
47.5°	840.1	616.9	411.3	232.3	100.8	58.6	36.9	26.7	5.1	3.1	4.1
50°	310.4	171.8	90.6	56.6	39.1	24.6	16.4	15.4	5.1	3.1	4.1
51°	127.5	83.2	56.6	38.1	24.6	17.6	13.3	13.3	5.1	3.1	4.1
52°	76.1	52.5	38.1	27.8	18.5	13.3	10.3	11.3	5.1	3.1	4.1
53°	50.3	36.1	27.8	21.6	14.5	10.3	7.2	8.2	5.1	3.1	4.1
54°	33.8	25.8	20.5	16.4	10.3	8.2	4.1	7.2	4.1	3.1	4.1
55°	23.6	18.5	15.4	12.3	7.2	5.1	3.1	6.2	4.1	3.1	4.1
57.5°	10.3	9.4	8.2	7.2	3.1	2.0	1.1	5.1	4.1	3.1	4.1
60°	7.2	6.2	5.1	5.1	1.1	1.1	0.0	4.1	4.1	3.1	4.1
61°	6.2	5.1	5.1	4.1	1.1	1.1	0.0	4.1	5.1	3.1	4.1
62°	5.1	5.1	4.1	4.1	1.1	0.0	0.0	4.1	5.1	3.1	5.1
63°	4.1	4.1	4.1	4.1	1.1	0.0	0.0	4.1	5.1	3.1	5.1
64°	4.1	4.1	4.1	4.1	0.0	0.0	0.0	4.1	5.1	3.1	5.1
65°	4.1	3.1	3.1	3.1	0.0	0.0	0.0	4.1	5.1	4.1	5.1
66°	3.1	3.1	3.1	3.1	0.0	0.0	0.0	4.1	5.1	4.1	5.1



TEST NUMBER: P1192097

CATALOG NUMBER: LDA6A25950D010TE LARL20NF 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°	2.0	2.0	2.0	2.0	0.0	0.0	0.0	3.1	5.1	4.1	6.2
75°	1.1	2.0	2.0	2.0	0.0	0.0	0.0	4.1	5.1	4.1	6.2
77.5°	1.1	2.0	2.0	2.0	0.0	0.0	0.0	4.1	5.1	4.1	6.2
80°	1.1	2.0	2.0	2.0	0.0	0.0	0.0	4.1	5.1	4.1	6.2
82.5°	1.1	2.0	2.0	2.0	0.0	0.0	0.0	4.1	5.1	4.1	6.2
85°	1.1	2.0	2.0	2.0	0.0	0.0	0.0	4.1	5.1	4.1	6.2
87.5°	1.1	2.0	2.0	2.0	0.0	0.0	0.0	4.1	5.1	4.1	6.2
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: P1192097

CATALOG NUMBER: LDA6A25950D010TE LARL20NF 6LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	59.7	59.7	59.7
2.5°	36.1	33.0	30.9
5°	25.8	23.6	21.6
7.5°	21.6	18.5	17.6
10°	19.6	14.5	13.3
12.5°	16.4	12.3	11.3
15°	15.4	12.3	11.3
17.5°	15.4	12.3	11.3
20°	16.4	15.4	15.4
22.5°	23.6	25.8	26.7
25°	71.9	92.6	107.0
26°	168.7	253.0	339.4
27°	256.2	373.3	397.9
28°	230.4	267.3	260.2
29°	111.1	125.5	114.2
30°	49.4	58.6	57.6
31°	31.8	36.1	34.9
32°	26.7	24.6	23.6
33°	21.6	17.6	14.5
34°	14.5	11.3	9.4
35°	9.4	6.2	5.1
36°	6.2	3.1	2.0
37°	4.1	2.0	1.1
38°	4.1	1.1	0.0
39°	3.1	1.1	0.0
40°	3.1	1.1	0.0
42.5°	3.1	0.0	0.0
45°	2.0	0.0	0.0
47.5°	2.0	0.0	0.0
50°	3.1	1.1	0.0
51°	3.1	0.0	0.0
52°	3.1	0.0	0.0
53°	2.0	0.0	0.0
54°	2.0	0.0	0.0
55°	2.0	0.0	0.0
57.5°	2.0	0.0	0.0
60°	2.0	0.0	0.0
61°	3.1	0.0	0.0
62°	3.1	0.0	0.0
63°	3.1	0.0	0.0
64°	3.1	1.1	0.0
65°	3.1	1.1	0.0
66°	3.1	1.1	0.0



TEST NUMBER: P1192097

CATALOG NUMBER: LDA6A25950D010TE LARL20NF 6LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
72.5°	4.1	1.1	0.0
75°	4.1	1.1	0.0
77.5°	4.1	1.1	0.0
80°	4.1	2.0	1.1
82.5°	4.1	2.0	1.1
85°	4.1	2.0	1.1
87.5°	4.1	2.0	1.1
90°	0.0	0.0	0.0

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



Report Generated By 670245859 / DESKTOP-T8S5UU9

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



— 0°-180° - - 45°-225° - - - 90°-270°

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



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

Scaled Data Report



67.5°	3.1	3.1	3.1	3.1	3.1	3.1	2.0	2.0	2.0	3.1	3.1
70°	3.1	3.1	2.0	2.0	2.0	2.0	2.0	1.1	1.1	3.1	3.1

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



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

Scaled Data Report



67.5°	3.1	3.1	3.1	3.1	0.0	0.0	0.0	4.1	5.1	4.1	5.1
70°	3.1	3.1	3.1	3.1	0.0	0.0	0.0	4.1	5.1	4.1	6.2

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



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

Scaled Data Report



67.5°	4.1	1.1	0.0
70°	4.1	1.1	0.0

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)