

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: P1191785

Luminaire Tested: **LDA4A30927D010TE LAR25NF 4LA1 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: P1191785
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25649)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A30927D010TE LAR25NF 4LA1 30° Tilt
Description: PORTFOLIO 4" Adjustable Reflector, Self-flanged Trim Ring, 25°
Narrow Flood Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

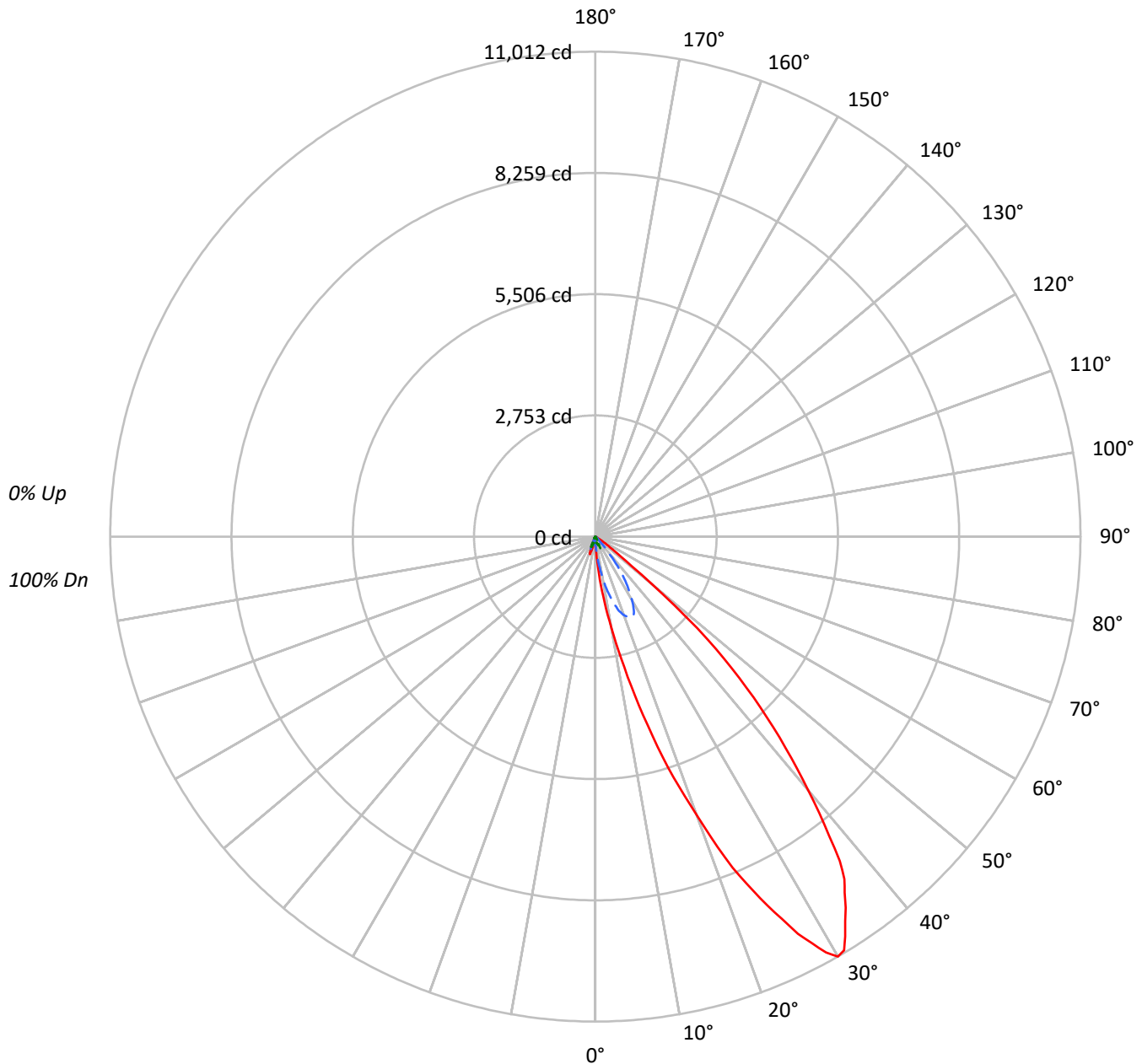
Lumens per Lamp: N/A
Luminaire Lumens: 2550.5 lumens
Efficiency: N/A
Efficacy: 64.7 lumens/watt
Spacing Criteria (0/90/45): 2.56 / 1.01 / 1.3
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 39.4
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: P1191785

CATALOG NUMBER: LDA4A30927D010TE LAR25NF 4LA1 30° Tilt

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191785

CATALOG NUMBER: LDA4A30927D010TE LAR25NF 4LA1 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
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	112	109	106	104	110	107	104	102		103	101	99			99	97	96			96
2	105	100	95	91	103	98	93	90		95	91	88			91	88	86			89
3	99	91	85	80	96	89	84	79		87	82	78			84	80	77			82
4	92	83	76	71	90	82	75	71		79	74	70			77	73	69			75
5	86	76	69	63	84	75	68	63		73	67	62			71	66	62			69
6	80	69	62	57	78	68	61	56		67	61	56			65	60	56			64
7	75	63	56	51	73	63	56	51		61	55	50			60	54	50			59
8	70	58	51	46	68	58	51	46		56	50	46			55	49	45			54
9	65	53	46	41	64	53	46	41		52	46	41			51	45	41			50
10	61	49	42	38	60	49	42	38		48	42	37			47	41	37			46

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	20858	20858	20858
5°	90597	19662	11911
10°	261206	17710	12951
15°	535228	19538	37415
20°	883024	36346	37882
25°	1257889	23205	12698
30°	1568381	10169	4985
35°	1486077	4608	2183
40°	1210359	2335	708
45°	847816	1273	0
50°	317696	844	0
55°	67697	946	0
60°	12951	715	0
65°	3823	1284	0
70°	1046	1587	0
75°	0	2097	0
80°	0	3125	0
85°	0	6227	0

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191785

CATALOG NUMBER: LDA4A30927D010TE LAR25NF 4LA1 30° Tilt

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.4	1.4
10°-20°	305.4	12.0
20°-30°	780.2	30.6
30°-40°	903.6	35.4
40°-50°	466.2	18.3
50°-60°	48.1	1.9
60°-70°	5.2	0.2
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°	1121.1	44.0
0°-40°	2024.7	79.4
0°-60°	2539.0	99.5
0°-90°	2550.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2550.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	169	169	169	169	169	
5°	732	380	159	105	96	114
15°	4191	1534	153	204	293	1283
25°	9243	2004	170	106	93	4294
35°	9869	1096	31	18	14	6043
45°	4860	128	7	4	0	3640
55°	315	19	4	3	0	394
65°	13	4	4	3	0	17
75°	0	3	4	4	0	0
85°	0	3	4	4	0	0
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191785

CATALOG NUMBER: LDA4A30927D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1
2.5°	291.5	281.2	274.0	276.9	293.0	275.4	276.9	271.1	268.2	265.3	258.0
5°	731.7	702.5	683.5	685.0	642.8	674.8	671.9	647.1	631.0	600.4	583.0
7.5°	1372.8	1310.2	1288.3	1281.0	1285.4	1254.8	1241.7	1209.7	1167.3	1111.9	1079.9
10°	2085.5	2047.6	2034.4	2011.1	2009.6	1955.8	1923.8	1882.9	1798.3	1721.2	1664.3
12.5°	3038.6	2922.0	2901.6	2857.9	2846.2	2754.4	2687.4	2627.6	2486.2	2384.2	2293.9
15°	4191.4	4096.6	4118.5	3984.5	3947.9	3797.8	3672.5	3544.3	3315.5	3159.6	2999.3
17.5°	5500.0	5379.1	5393.7	5226.0	4924.4	4952.1	4769.9	4593.6	4271.5	4063.1	3815.4
20°	6727.2	6641.2	6647.0	6424.0	6322.0	6045.2	5801.8	5591.9	5163.4	4898.1	4570.2
22.5°	8139.3	7916.3	7874.1	7571.0	7391.7	7020.0	6680.5	6402.2	5883.3	5584.6	5182.4
25°	9242.6	9089.6	8973.0	8614.5	8365.3	7881.3	7487.9	7075.4	6451.7	6120.9	5642.9
26°	9656.5	9512.2	9362.1	8975.9	8696.1	8184.5	7756.0	7313.0	6645.6	6291.4	5771.2
27°	10124.2	9888.2	9707.5	9274.6	8971.5	8433.7	7925.1	7506.9	6792.8	6400.8	5852.7
28°	10455.1	10219.0	9980.0	9509.3	9181.4	8618.8	8089.8	7633.6	6878.8	6453.1	5886.2
29°	10794.6	10544.0	10195.7	9682.7	9325.7	8734.0	8184.5	7696.3	6903.4	6450.2	5868.8
30°	11011.8	10759.7	10309.4	9780.3	9402.8	8780.5	8210.7	7684.7	6864.1	6391.9	5804.7
31°	10960.8	10729.1	10281.7	9790.5	9395.6	8753.0	8162.7	7601.6	6765.1	6288.5	5688.1
32°	10705.7	10508.9	10169.4	9722.0	9315.4	8658.1	8050.4	7470.5	6622.2	6167.6	5546.7
33°	10409.9	10246.7	10012.1	9583.5	9175.6	8515.4	7896.0	7308.6	6457.6	6002.8	5376.2
34°	10162.2	10015.0	9797.9	9397.0	8984.6	8324.4	7700.6	7104.6	6269.5	5809.1	5175.1
35°	9869.2	9735.1	9534.1	9145.0	8719.3	8068.0	7455.8	6868.5	6048.1	5578.8	4941.9
36°	9614.1	9402.8	9198.8	8820.0	8395.9	7757.5	7167.2	6591.6	5797.3	5315.0	4679.6
37°	9219.2	9007.9	8789.4	8430.8	8012.6	7401.9	6846.7	6295.8	5511.7	5116.8	4399.8
38°	8629.0	8531.4	8312.8	7971.7	7582.6	7009.9	6495.5	5959.2	5189.6	4733.5	4102.5
39°	8078.1	7997.9	7785.2	7473.4	7113.4	6588.7	6106.4	5580.2	4826.8	4395.3	3789.1
40°	7517.0	7436.8	7237.3	6955.9	6632.4	6150.0	5692.5	5176.6	4446.4	4047.1	3474.4
42.5°	6188.0	6104.9	6062.6	5775.5	5433.0	5019.1	4595.0	4128.6	3507.9	3180.0	2731.1
45°	4860.3	4784.4	4625.6	4507.6	4201.6	3857.6	3512.3	3131.9	2674.3	2350.7	1931.0
47.5°	3474.4	3437.9	3443.7	3225.1	2933.6	2662.6	2377.0	2033.0	1627.9	1221.3	896.3
50°	1655.6	1665.8	1706.5	1553.5	1335.0	1176.0	1007.1	789.8	577.1	453.2	351.3
51°	1072.6	1084.2	1119.3	1010.0	851.2	743.3	635.4	513.0	409.6	348.4	278.3
52°	725.7	725.7	733.1	668.9	590.3	529.1	466.4	394.9	319.2	274.0	220.0
53°	545.0	543.6	546.5	504.3	450.3	405.2	361.4	308.9	252.1	214.2	170.5
54°	416.8	415.4	418.3	386.2	348.4	314.8	281.2	241.9	195.3	160.3	128.2
55°	314.8	314.8	319.2	294.4	265.3	239.0	214.2	180.7	144.3	116.6	93.3
57.5°	126.8	126.8	131.1	122.4	109.3	99.1	90.4	77.3	64.1	53.9	43.7
60°	52.5	53.9	55.4	51.0	48.1	45.2	42.2	37.9	33.5	27.7	23.3
61°	39.3	39.3	40.8	37.9	36.4	33.5	32.1	29.2	26.2	21.9	19.0
62°	29.2	29.2	30.6	29.2	27.7	26.2	24.8	23.3	20.4	17.5	14.5
63°	21.9	21.9	23.3	21.9	21.9	20.4	19.0	17.5	16.1	13.1	11.6
64°	17.5	17.5	17.5	16.1	16.1	16.1	14.5	14.5	11.6	10.2	8.7
65°	13.1	13.1	13.1	13.1	11.6	11.6	11.6	10.2	10.2	7.3	7.3
66°	10.2	10.2	10.2	8.7	8.7	8.7	8.7	8.7	7.3	5.8	4.4



TEST NUMBER: P1191785

CATALOG NUMBER: LDA4A30927D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
72.5°	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
75°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
77.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
82.5°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
85°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
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: P1191785

CATALOG NUMBER: LDA4A30927D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1
2.5°	260.9	259.4	244.8	244.8	250.6	241.9	237.6	227.4	195.3	166.2	139.9
5°	577.1	561.1	511.5	497.0	495.6	454.7	431.3	380.4	222.9	158.8	121.0
7.5°	1065.4	1017.2	932.7	887.6	832.2	800.1	743.3	655.8	253.6	148.7	109.3
10°	1575.4	1521.5	1396.2	1316.0	1273.8	1170.2	1075.5	956.0	284.2	141.4	107.9
12.5°	2159.7	2038.8	1919.3	1776.6	1649.7	1557.9	1400.5	1260.6	304.6	139.9	118.1
15°	2792.3	2640.8	2436.7	2244.3	2065.0	1933.9	1722.6	1534.5	311.8	153.0	154.5
17.5°	3500.5	3216.4	2922.0	2659.7	2413.4	2237.0	1974.7	1753.2	307.5	188.0	246.3
20°	4163.7	3786.2	3387.0	3022.5	2674.3	2445.4	2142.3	1901.9	308.9	276.9	332.3
22.5°	4689.7	4230.7	3744.0	3299.5	2857.9	2583.9	2253.1	1980.5	346.9	295.9	225.9
25°	5077.4	4536.7	3978.5	3467.0	3002.2	2694.6	2331.7	2003.8	323.6	170.5	128.2
26°	5180.9	4611.1	4022.3	3491.8	3019.6	2694.6	2320.1	1979.0	279.8	135.6	106.4
27°	5239.2	4644.6	4029.6	3480.2	2997.8	2664.0	2277.8	1929.6	228.8	113.7	90.4
28°	5246.5	4630.0	3993.2	3432.1	2936.5	2598.4	2202.1	1853.7	189.4	96.2	74.3
29°	5207.2	4576.0	3923.3	3351.9	2843.3	2502.3	2098.5	1760.5	161.7	83.1	62.7
30°	5124.1	4481.3	3816.8	3244.1	2722.3	2385.7	1977.6	1657.1	141.4	71.4	52.5
31°	5004.6	4351.7	3701.7	3115.8	2595.5	2269.1	1864.0	1552.1	125.3	59.8	43.7
32°	4850.1	4198.7	3553.0	2977.4	2481.8	2158.3	1754.7	1445.6	112.2	51.0	36.4
33°	4678.1	4025.2	3391.3	2833.1	2372.6	2044.7	1639.5	1333.5	100.5	42.2	30.6
34°	4479.9	3834.4	3219.3	2688.8	2256.0	1919.3	1515.7	1218.4	87.5	35.0	26.2
35°	4254.1	3621.5	3034.3	2557.7	2126.2	1783.8	1385.9	1096.0	77.3	30.6	21.9
36°	4009.1	3400.0	2847.6	2407.6	1986.4	1642.4	1249.0	972.1	67.0	26.2	19.0
37°	3752.7	3169.7	2661.1	2237.0	1831.8	1492.3	1107.6	838.0	58.3	21.9	16.1
38°	3481.7	2938.1	2480.4	2075.3	1668.7	1330.6	963.3	690.8	51.0	19.0	14.5
39°	3204.7	2709.2	2301.1	1897.5	1501.0	1171.7	824.9	536.3	45.2	16.1	13.1
40°	2933.6	2493.6	2111.7	1703.6	1333.5	1015.8	690.8	394.9	39.3	14.5	10.2
42.5°	2323.0	1914.9	1515.7	1136.7	929.8	644.2	383.3	207.0	27.7	10.2	7.3
45°	1520.0	1132.4	817.5	553.9	480.9	272.5	177.8	128.2	20.4	7.3	5.8
47.5°	629.6	459.0	319.2	230.3	186.5	145.8	113.7	83.1	14.5	5.8	5.8
50°	276.9	218.6	173.4	135.6	118.1	94.7	72.8	51.0	8.7	4.4	4.4
51°	221.5	176.4	135.6	107.9	96.2	77.3	59.8	40.8	8.7	4.4	4.4
52°	174.9	137.0	106.4	83.1	77.3	62.7	49.6	33.5	7.3	4.4	4.4
53°	134.0	103.4	80.2	65.6	61.2	51.0	40.8	27.7	5.8	4.4	4.4
54°	99.1	78.7	62.7	51.0	49.6	40.8	33.5	23.3	5.8	4.4	4.4
55°	72.8	61.2	48.1	40.8	39.3	33.5	27.7	19.0	5.8	4.4	4.4
57.5°	37.9	32.1	26.2	23.3	23.3	21.9	19.0	11.6	4.4	2.9	4.4
60°	20.4	17.5	14.5	13.1	16.1	14.5	13.1	7.3	4.4	2.9	4.4
61°	16.1	14.5	11.6	10.2	13.1	11.6	11.6	5.8	4.4	4.4	4.4
62°	13.1	11.6	10.2	8.7	11.6	10.2	10.2	5.8	4.4	4.4	4.4
63°	10.2	8.7	7.3	7.3	10.2	10.2	8.7	4.4	4.4	4.4	4.4
64°	7.3	7.3	5.8	5.8	8.7	8.7	7.3	4.4	4.4	4.4	4.4
65°	5.8	5.8	4.4	4.4	7.3	7.3	7.3	4.4	4.4	4.4	4.4
66°	4.4	4.4	4.4	2.9	5.8	7.3	7.3	2.9	4.4	4.4	4.4



TEST NUMBER: P1191785

CATALOG NUMBER: LDA4A30927D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
72.5°	1.5	1.5	1.5	1.5	4.4	5.8	5.8	2.9	4.4	4.4	4.4
75°	1.5	1.5	1.5	1.5	4.4	5.8	5.8	2.9	4.4	4.4	4.4
77.5°	1.5	1.5	1.5	1.5	4.4	5.8	5.8	2.9	4.4	4.4	5.8
80°	1.5	1.5	1.5	1.5	4.4	5.8	5.8	2.9	4.4	4.4	5.8
82.5°	1.5	1.5	1.5	1.5	4.4	5.8	5.8	2.9	4.4	4.4	5.8
85°	1.5	1.5	1.5	1.5	4.4	5.8	5.8	2.9	4.4	4.4	5.8
87.5°	1.5	1.5	1.5	1.5	4.4	5.8	5.8	2.9	4.4	4.4	5.8
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: P1191785

CATALOG NUMBER: LDA4A30927D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	169.1	169.1	169.1
2.5°	126.8	119.5	118.1
5°	105.0	97.6	96.2
7.5°	96.2	90.4	88.9
10°	99.1	100.5	103.4
12.5°	126.8	139.9	151.6
15°	204.1	256.5	293.0
17.5°	355.6	393.5	418.3
20°	311.8	287.1	288.6
22.5°	174.9	157.4	155.9
25°	106.4	96.2	93.3
26°	88.9	80.2	77.3
27°	72.8	65.6	62.7
28°	59.8	53.9	52.5
29°	51.0	43.7	42.2
30°	42.2	36.4	35.0
31°	35.0	30.6	29.2
32°	30.6	26.2	23.3
33°	24.8	21.9	20.4
34°	21.9	17.5	16.1
35°	17.5	14.5	14.5
36°	16.1	13.1	11.6
37°	13.1	10.2	10.2
38°	11.6	8.7	7.3
39°	10.2	7.3	5.8
40°	8.7	5.8	4.4
42.5°	5.8	2.9	1.5
45°	4.4	1.5	0.0
47.5°	2.9	1.5	0.0
50°	2.9	0.0	0.0
51°	2.9	0.0	0.0
52°	2.9	0.0	0.0
53°	2.9	0.0	0.0
54°	2.9	0.0	0.0
55°	2.9	0.0	0.0
57.5°	2.9	0.0	0.0
60°	2.9	0.0	0.0
61°	2.9	0.0	0.0
62°	2.9	0.0	0.0
63°	2.9	1.5	0.0
64°	2.9	1.5	0.0
65°	2.9	1.5	0.0
66°	2.9	1.5	0.0



TEST NUMBER: P1191785

CATALOG NUMBER: LDA4A30927D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
72.5°	4.4	1.5	0.0
75°	4.4	1.5	0.0
77.5°	4.4	1.5	0.0
80°	4.4	1.5	0.0
82.5°	4.4	1.5	0.0
85°	4.4	1.5	0.0
87.5°	2.9	1.5	0.0
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





67.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	4.4	2.9
70°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	1.5	1.5

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report





67.5°	2.9	2.9	2.9	2.9	5.8	5.8	5.8	2.9	4.4	4.4	4.4
70°	1.5	1.5	1.5	2.9	4.4	5.8	5.8	2.9	4.4	4.4	4.4

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°	2.9	1.5	0.0
70°	2.9	1.5	0.0

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)