

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: P1191713

Luminaire Tested: **LDA4A25930D010TE 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: P1191713
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: LDA4A25930D010TE 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 / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

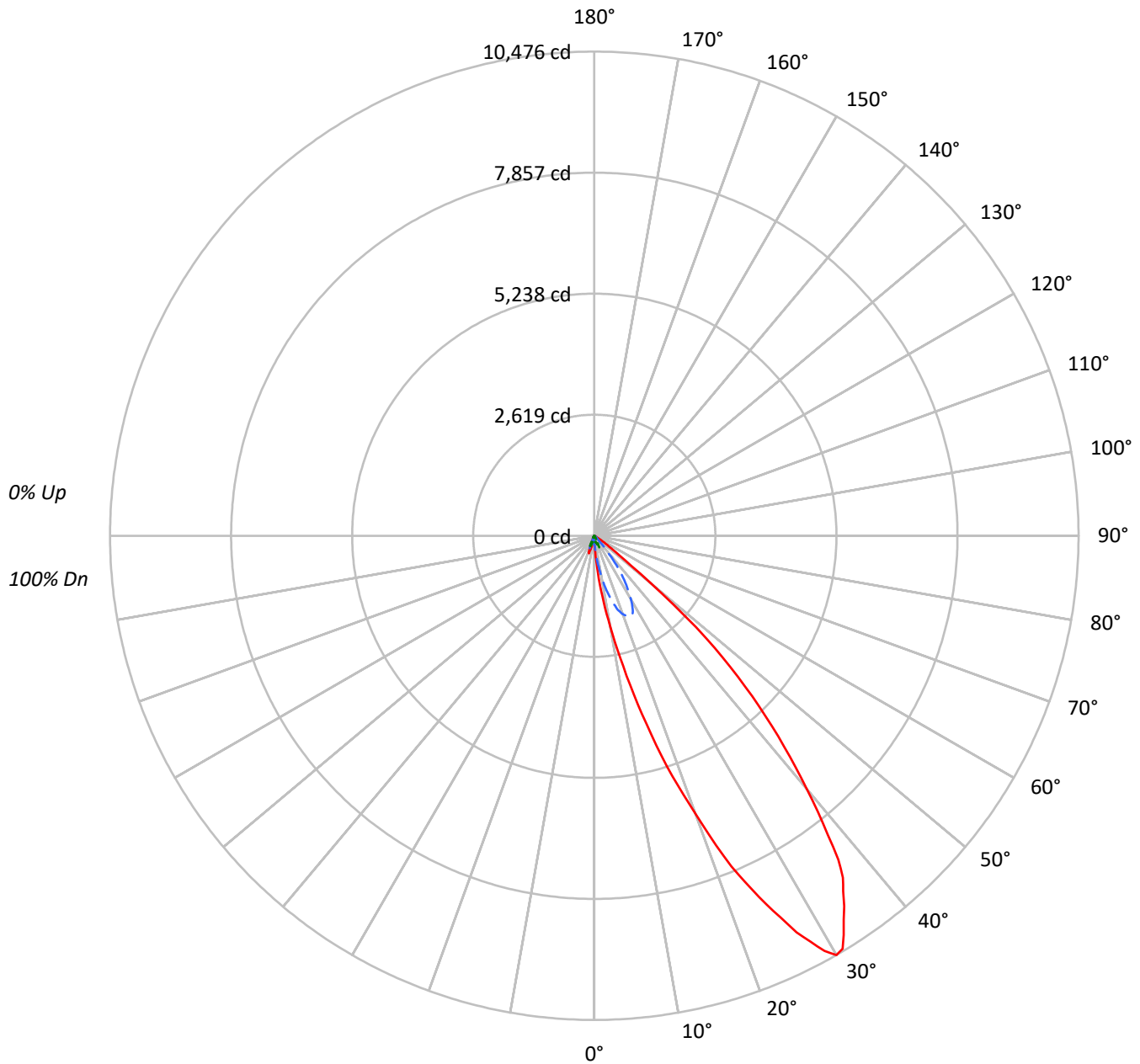
Lumens per Lamp: N/A
Luminaire Lumens: 2426.2 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Spacing Criteria (0/90/45): 2.56 / 1.01 / 1.3
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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
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°	19834	19834	19834
5°	86176	18709	11329
10°	248493	16833	12324
15°	509165	18580	35589
20°	840035	34574	36031
25°	1196659	22075	12072
30°	1492040	9671	4743
35°	1413739	4382	2078
40°	1151460	2222	660
45°	806545	1221	0
50°	302229	787	0
55°	64406	882	0
60°	12335	666	0
65°	3648	1197	0
70°	974	1479	0
75°	0	1954	0
80°	0	2912	0
85°	0	5802	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.7	1.4
10°-20°	290.6	12.0
20°-30°	742.2	30.6
30°-40°	859.6	35.4
40°-50°	443.5	18.3
50°-60°	45.8	1.9
60°-70°	4.9	0.2
70°-80°	3.1	0.1
80°-90°	2.8	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°	1066.5	44.0
0°-40°	1926.1	79.4
0°-60°	2415.4	99.6
0°-90°	2426.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2426.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	161	161	161	161	161	
5°	696	362	151	100	92	109
15°	3987	1460	146	194	279	1221
25°	8793	1906	162	101	89	4085
35°	9389	1043	29	17	14	5749
45°	4624	122	7	4	0	3462
55°	300	18	4	3	0	375
65°	12	4	4	3	0	16
75°	0	3	4	4	0	0
85°	0	3	4	4	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°	160.8	160.8	160.8	160.8	160.8	160.8	160.8	160.8	160.8	160.8	160.8
2.5°	277.3	267.6	260.6	263.4	278.7	262.0	263.4	257.9	255.2	252.3	245.4
5°	696.0	668.3	650.2	651.6	611.4	641.9	639.2	615.6	600.3	571.2	554.6
7.5°	1306.0	1246.4	1225.6	1218.6	1222.9	1193.7	1181.2	1150.7	1110.5	1057.8	1027.4
10°	1984.0	1947.9	1935.4	1913.2	1911.9	1860.5	1830.1	1791.3	1710.9	1637.4	1583.3
12.5°	2890.7	2779.8	2760.3	2718.7	2707.6	2620.3	2556.5	2499.7	2365.2	2268.2	2182.2
15°	3987.3	3897.2	3918.0	3790.5	3755.8	3613.0	3493.8	3371.8	3154.0	3005.8	2853.3
17.5°	5232.3	5117.2	5131.2	4971.7	4684.7	4711.1	4537.7	4369.9	4063.6	3865.3	3629.6
20°	6399.7	6317.9	6323.4	6111.3	6014.3	5750.9	5519.3	5319.7	4912.0	4659.7	4347.8
22.5°	7743.1	7531.1	7490.8	7202.4	7031.9	6678.4	6355.3	6090.5	5596.9	5312.7	4930.1
25°	8792.7	8647.0	8536.1	8195.1	7958.0	7497.8	7123.4	6731.1	6137.6	5822.9	5368.2
26°	9186.4	9049.1	8906.3	8538.9	8272.8	7786.1	7378.6	6957.1	6322.0	5985.1	5490.2
27°	9631.4	9406.8	9235.0	8823.2	8534.8	8023.2	7539.3	7141.5	6462.1	6089.2	5567.9
28°	9946.1	9721.5	9494.1	9046.3	8734.4	8199.2	7696.0	7262.1	6543.9	6139.0	5599.8
29°	10269.2	10030.7	9699.3	9211.3	8871.7	8308.8	7786.1	7321.6	6567.5	6136.3	5583.1
30°	10475.8	10235.9	9807.5	9304.2	8945.2	8353.1	7811.0	7310.5	6530.0	6080.8	5522.1
31°	10427.2	10206.8	9781.2	9314.0	8938.2	8326.8	7765.3	7231.5	6435.8	5982.4	5411.1
32°	10184.6	9997.5	9674.4	9248.8	8862.0	8236.7	7658.5	7106.8	6299.9	5867.3	5276.7
33°	9903.2	9747.9	9524.7	9117.1	8728.9	8100.8	7511.6	6952.8	6143.2	5710.7	5114.5
34°	9667.4	9527.4	9320.8	8939.6	8547.2	7919.2	7325.9	6758.7	5964.3	5526.3	4923.1
35°	9388.8	9261.3	9069.9	8699.7	8294.9	7675.2	7092.9	6534.2	5753.6	5307.2	4701.3
36°	9146.2	8945.2	8751.1	8390.6	7987.2	7379.9	6818.4	6270.8	5515.2	5056.3	4451.8
37°	8770.5	8569.4	8361.5	8020.4	7622.5	7041.7	6513.4	5989.4	5243.4	4867.7	4185.5
38°	8209.0	8116.0	7908.1	7583.6	7213.5	6668.6	6179.2	5669.0	4937.1	4503.1	3902.7
39°	7684.9	7608.7	7406.2	7109.6	6767.1	6268.0	5809.1	5308.6	4591.8	4181.4	3604.7
40°	7151.2	7074.9	6884.9	6617.3	6309.6	5850.7	5415.4	4924.6	4230.0	3850.1	3305.2
42.5°	5886.7	5807.7	5767.5	5494.4	5168.6	4774.8	4371.4	3927.7	3337.1	3025.2	2598.1
45°	4623.7	4551.6	4400.5	4288.2	3997.0	3669.8	3341.3	2979.4	2544.0	2236.3	1837.0
47.5°	3305.2	3270.5	3276.1	3068.2	2790.9	2533.0	2261.2	1934.0	1548.7	1161.8	852.7
50°	1575.0	1584.7	1623.4	1477.9	1270.0	1118.8	958.0	751.4	549.1	431.2	334.1
51°	1020.4	1031.5	1064.8	960.7	809.7	707.1	604.5	488.0	389.6	331.4	264.8
52°	690.5	690.5	697.3	636.4	561.5	503.2	443.7	375.8	303.6	260.6	209.3
53°	518.5	517.2	519.9	479.7	428.4	385.5	343.9	293.9	239.8	203.8	162.2
54°	396.6	395.1	397.9	367.4	331.4	299.5	267.6	230.1	185.8	152.5	122.0
55°	299.5	299.5	303.6	280.1	252.3	227.4	203.8	171.9	137.3	110.9	88.7
57.5°	120.6	120.6	124.7	116.5	104.0	94.3	86.0	73.5	61.0	51.3	41.6
60°	50.0	51.3	52.7	48.5	45.7	43.0	40.2	36.0	31.9	26.3	22.2
61°	37.4	37.4	38.9	36.0	34.6	31.9	30.5	27.8	24.9	20.8	18.1
62°	27.8	27.8	29.1	27.8	26.3	24.9	23.6	22.2	19.4	16.7	13.8
63°	20.8	20.8	22.2	20.8	20.8	19.4	18.1	16.7	15.2	12.5	11.1
64°	16.7	16.7	16.7	15.2	15.2	15.2	13.8	13.8	11.1	9.7	8.3
65°	12.5	12.5	12.5	12.5	11.1	11.1	11.1	9.7	9.7	7.0	7.0
66°	9.7	9.7	9.7	8.3	8.3	8.3	8.3	8.3	7.0	5.6	4.1



TEST NUMBER: P1191713

CATALOG NUMBER: LDA4A25930D010TE 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	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
75°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
85°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
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):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	160.8	160.8	160.8	160.8	160.8	160.8	160.8	160.8	160.8	160.8	160.8
2.5°	248.2	246.8	232.9	232.9	238.5	230.1	226.0	216.3	185.8	158.1	133.1
5°	549.1	533.8	486.7	472.8	471.3	432.6	410.4	361.8	212.2	151.1	115.1
7.5°	1013.4	967.7	887.3	844.4	791.7	761.1	707.1	623.8	241.2	141.4	104.0
10°	1498.7	1447.4	1328.2	1251.9	1211.8	1113.2	1023.2	909.5	270.4	134.4	102.5
12.5°	2054.6	1939.6	1825.9	1690.1	1569.5	1482.0	1332.4	1199.2	289.8	133.1	112.3
15°	2656.4	2512.1	2318.0	2135.1	1964.6	1839.7	1638.8	1459.9	296.7	145.5	147.0
17.5°	3330.2	3059.8	2779.8	2530.2	2295.9	2128.1	1878.6	1667.9	292.5	178.8	234.3
20°	3961.0	3601.9	3222.1	2875.4	2544.0	2326.4	2038.1	1809.3	293.9	263.4	316.1
22.5°	4461.5	4024.8	3561.7	3138.8	2718.7	2458.1	2143.4	1884.2	329.9	281.5	214.9
25°	4830.3	4316.0	3785.0	3298.3	2856.0	2563.5	2218.2	1906.4	307.7	162.2	122.0
26°	4928.7	4386.6	3826.5	3321.9	2872.7	2563.5	2207.1	1882.7	266.1	128.9	101.2
27°	4984.2	4418.5	3833.4	3310.8	2851.9	2534.3	2167.0	1835.6	217.7	108.1	86.0
28°	4991.1	4404.7	3798.8	3265.0	2793.6	2472.0	2094.9	1763.5	180.3	91.5	70.8
29°	4953.6	4353.4	3732.3	3188.8	2704.9	2380.5	1996.5	1674.8	153.9	79.0	59.7
30°	4874.6	4263.3	3631.0	3086.1	2589.9	2269.6	1881.3	1576.3	134.4	67.9	50.0
31°	4760.9	4139.8	3521.5	2964.2	2469.2	2158.7	1773.2	1476.5	119.2	56.8	41.6
32°	4614.0	3994.3	3380.1	2832.5	2361.0	2053.3	1669.3	1375.4	106.8	48.5	34.6
33°	4450.4	3829.3	3226.2	2695.2	2257.1	1945.1	1559.8	1268.6	95.7	40.2	29.1
34°	4261.9	3647.7	3062.6	2558.0	2146.2	1825.9	1441.9	1159.1	83.2	33.3	24.9
35°	4047.0	3445.2	2886.5	2433.2	2022.8	1696.9	1318.4	1042.6	73.5	29.1	20.8
36°	3814.0	3234.5	2709.0	2290.4	1889.7	1562.5	1188.1	924.7	63.8	24.9	18.1
37°	3570.0	3015.5	2531.6	2128.1	1742.8	1419.7	1053.7	797.1	55.4	20.8	15.2
38°	3312.1	2795.0	2359.6	1974.3	1587.4	1265.8	916.4	657.2	48.5	18.1	13.8
39°	3048.8	2577.3	2189.2	1805.1	1428.1	1114.7	784.7	510.2	43.0	15.2	12.5
40°	2790.9	2372.1	2008.9	1620.7	1268.6	966.3	657.2	375.8	37.4	13.8	9.7
42.5°	2210.0	1821.8	1441.9	1081.4	884.5	612.8	364.7	196.9	26.3	9.7	7.0
45°	1446.0	1077.2	777.8	526.9	457.5	259.3	169.2	122.0	19.4	7.0	5.6
47.5°	598.9	436.7	303.6	219.0	177.4	138.7	108.1	79.0	13.8	5.6	5.6
50°	263.4	207.9	165.0	128.9	112.3	90.1	69.3	48.5	8.3	4.1	4.1
51°	210.7	167.7	128.9	102.5	91.5	73.5	56.8	38.9	8.3	4.1	4.1
52°	166.3	130.3	101.2	79.0	73.5	59.7	47.1	31.9	7.0	4.1	4.1
53°	127.6	98.4	76.3	62.4	58.2	48.5	38.9	26.3	5.6	4.1	4.1
54°	94.3	74.9	59.7	48.5	47.1	38.9	31.9	22.2	5.6	4.1	4.1
55°	69.3	58.2	45.7	38.9	37.4	31.9	26.3	18.1	5.6	4.1	4.1
57.5°	36.0	30.5	24.9	22.2	22.2	20.8	18.1	11.1	4.1	2.7	4.1
60°	19.4	16.7	13.8	12.5	15.2	13.8	12.5	7.0	4.1	2.7	4.1
61°	15.2	13.8	11.1	9.7	12.5	11.1	11.1	5.6	4.1	4.1	4.1
62°	12.5	11.1	9.7	8.3	11.1	9.7	9.7	5.6	4.1	4.1	4.1
63°	9.7	8.3	7.0	7.0	9.7	9.7	8.3	4.1	4.1	4.1	4.1
64°	7.0	7.0	5.6	5.6	8.3	8.3	7.0	4.1	4.1	4.1	4.1
65°	5.6	5.6	4.1	4.1	7.0	7.0	7.0	4.1	4.1	4.1	4.1
66°	4.1	4.1	4.1	2.7	5.6	7.0	7.0	2.7	4.1	4.1	4.1



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CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
72.5°	1.4	1.4	1.4	1.4	4.1	5.6	5.6	2.7	4.1	4.1	4.1
75°	1.4	1.4	1.4	1.4	4.1	5.6	5.6	2.7	4.1	4.1	4.1
77.5°	1.4	1.4	1.4	1.4	4.1	5.6	5.6	2.7	4.1	4.1	5.6
80°	1.4	1.4	1.4	1.4	4.1	5.6	5.6	2.7	4.1	4.1	5.6
82.5°	1.4	1.4	1.4	1.4	4.1	5.6	5.6	2.7	4.1	4.1	5.6
85°	1.4	1.4	1.4	1.4	4.1	5.6	5.6	2.7	4.1	4.1	5.6
87.5°	1.4	1.4	1.4	1.4	4.1	5.6	5.6	2.7	4.1	4.1	5.6
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):

	135°	157.5°	180°
0°	160.8	160.8	160.8
2.5°	120.6	113.6	112.3
5°	99.8	92.9	91.5
7.5°	91.5	86.0	84.6
10°	94.3	95.7	98.4
12.5°	120.6	133.1	144.2
15°	194.1	244.1	278.7
17.5°	338.3	374.3	397.9
20°	296.7	273.1	274.5
22.5°	166.3	149.8	148.4
25°	101.2	91.5	88.7
26°	84.6	76.3	73.5
27°	69.3	62.4	59.7
28°	56.8	51.3	50.0
29°	48.5	41.6	40.2
30°	40.2	34.6	33.3
31°	33.3	29.1	27.8
32°	29.1	24.9	22.2
33°	23.6	20.8	19.4
34°	20.8	16.7	15.2
35°	16.7	13.8	13.8
36°	15.2	12.5	11.1
37°	12.5	9.7	9.7
38°	11.1	8.3	7.0
39°	9.7	7.0	5.6
40°	8.3	5.6	4.1
42.5°	5.6	2.7	1.4
45°	4.1	1.4	0.0
47.5°	2.7	1.4	0.0
50°	2.7	0.0	0.0
51°	2.7	0.0	0.0
52°	2.7	0.0	0.0
53°	2.7	0.0	0.0
54°	2.7	0.0	0.0
55°	2.7	0.0	0.0
57.5°	2.7	0.0	0.0
60°	2.7	0.0	0.0
61°	2.7	0.0	0.0
62°	2.7	0.0	0.0
63°	2.7	1.4	0.0
64°	2.7	1.4	0.0
65°	2.7	1.4	0.0
66°	2.7	1.4	0.0



TEST NUMBER: P1191713

CATALOG NUMBER: LDA4A25930D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
72.5°	4.1	1.4	0.0
75°	4.1	1.4	0.0
77.5°	4.1	1.4	0.0
80°	4.1	1.4	0.0
82.5°	4.1	1.4	0.0
85°	4.1	1.4	0.0
87.5°	2.7	1.4	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°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	4.1	2.7
70°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.4	1.4

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67.5°	2.7	2.7	2.7	2.7	5.6	5.6	5.6	2.7	4.1	4.1	4.1
70°	1.4	1.4	1.4	2.7	4.1	5.6	5.6	2.7	4.1	4.1	4.1

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67.5°	2.7	1.4	0.0
70°	2.7	1.4	0.0

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(END OF REPORT)