

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: P1219553

Luminaire Tested: **LDSQA4A25950D010TE LAR35FL 4LSQAL1H 30°**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1219553
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26804)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQA4A25950D010TE LAR35FL 4LSQAL1H 30°
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 35° FLOOD, 30° Tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

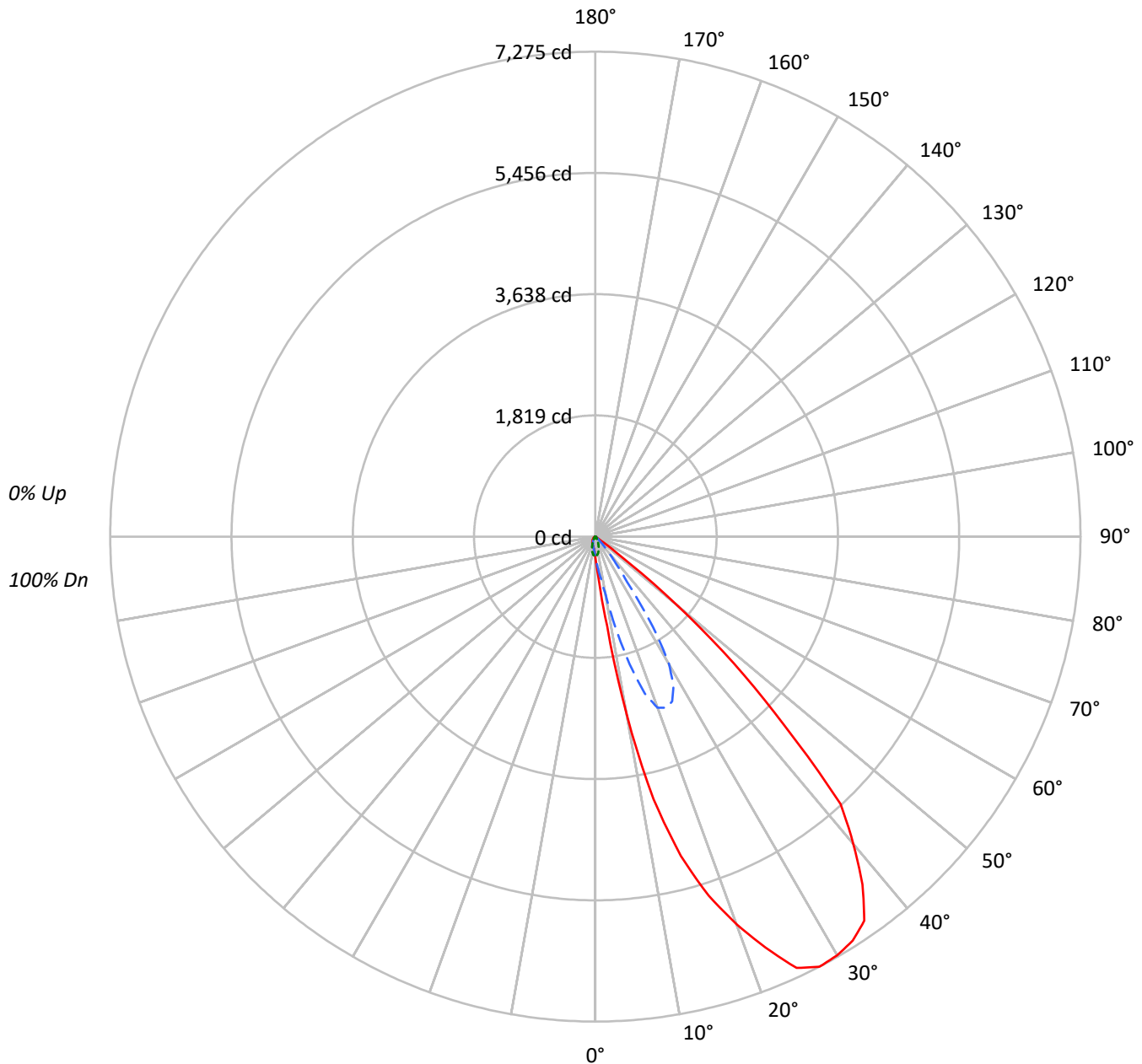
Lumens per Lamp: N/A
Luminaire Lumens: 2422.8 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Spacing Criteria (0/90/45): 2.46 / 0.61 / 1.2
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	86	84
3	99	91	85	80	97	90	84	80	87	82	78	84	80	77	82	79	76
4	92	83	77	71	90	82	76	71	80	74	70	78	73	69	76	72	68
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46
9	66	54	47	42	64	54	47	42	53	46	42	52	46	42	51	45	42
10	62	50	43	38	60	50	43	38	49	42	38	48	42	38	47	42	38

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	29024	29024	29024
5°	68013	27384	19148
10°	268747	24061	15965
15°	497372	19276	14011
20°	637742	14021	12670
25°	763036	9951	11223
30°	811358	6533	9877
35°	831519	3962	8610
40°	761174	2567	7385
45°	549257	1808	6056
50°	239782	1447	5049
55°	16552	1216	4222
60°	3003	1143	3468
65°	1100	1100	2476
70°	991	1360	1671
75°	898	1797	1797
80°	0	2678	1953
85°	0	5335	1223

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.6	1.8
10°-20°	342.9	14.2
20°-30°	717.9	29.6
30°-40°	799.2	33.0
40°-50°	458.8	18.9
50°-60°	45.8	1.9
60°-70°	7.2	0.3
70°-80°	4.5	0.2
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°	1104.5	45.6
0°-40°	1903.7	78.6
0°-60°	2408.3	99.4
0°-90°	2422.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2422.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	300	300	300	300	300	
5°	699	482	282	205	197	128
15°	4959	1980	192	135	140	1402
25°	7138	2725	93	82	105	3233
35°	7031	832	34	48	73	4293
45°	4009	100	13	26	44	3061
55°	98	14	7	16	25	292
65°	5	4	5	10	11	6
75°	2	2	5	6	5	2
85°	0	2	5	4	1	0
90°	0	0	0	0	0	

TEST NUMBER: P1219553

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6
2.5°	447.6	438.0	428.6	422.6	416.5	424.9	418.9	416.5	399.9	391.5	384.3
5°	699.4	681.5	655.2	633.8	612.2	617.0	600.3	580.0	538.3	508.5	482.2
7.5°	1349.8	1305.7	1224.6	1145.8	1067.0	1052.7	1000.2	909.5	792.5	704.2	627.8
10°	2732.0	2598.3	2449.1	2288.1	2099.4	2046.9	1916.8	1671.0	1402.3	1095.7	873.7
12.5°	4033.0	3972.1	3796.6	3587.7	3383.7	3258.3	3123.5	2717.6	2291.5	1797.5	1384.6
15°	4959.2	4922.2	4768.2	4578.4	4358.7	4277.6	4112.9	3708.3	3169.9	2579.2	1980.1
17.5°	5645.4	5582.1	5421.1	5214.6	4954.4	4885.2	4688.2	4285.9	3727.4	3134.2	2469.4
20°	6186.1	6146.7	5937.9	5689.6	5378.0	5294.5	5064.2	4645.3	4037.7	3407.6	2730.8
22.5°	6671.9	6605.0	6348.4	6052.4	5696.8	5607.3	5350.7	4891.1	4238.2	3536.4	2777.3
25°	7138.5	7037.2	6725.7	6337.7	5920.0	5798.2	5516.6	5029.5	4312.3	3547.2	2724.8
27.5°	7274.6	7223.2	6935.7	6484.5	6001.1	5863.8	5570.3	5060.6	4284.8	3449.3	2536.2
30°	7253.2	7210.2	6970.3	6498.9	5986.9	5842.3	5544.0	4965.1	4124.8	3193.9	2203.2
32.5°	7185.2	7168.4	6878.5	6374.8	5853.1	5695.6	5373.3	4727.6	3825.3	2804.8	1610.0
35°	7031.1	6965.5	6603.8	6130.0	5628.8	5455.6	5091.5	4387.4	3430.2	2042.1	831.9
37.5°	6580.0	6528.7	6243.4	5828.1	5340.0	5117.9	4733.6	3948.3	2655.6	1161.3	497.6
40°	6019.0	5993.9	5769.6	5398.4	4876.9	4626.1	4208.4	3231.0	1620.8	660.0	328.2
42.5°	5443.7	5436.5	5196.7	4808.8	4243.1	3955.3	3522.2	2179.4	861.6	398.6	189.8
45°	4009.1	4052.0	3884.9	3652.3	3220.2	3011.3	2449.1	1123.1	496.5	220.9	100.4
47.5°	2812.0	2764.2	2468.2	2061.3	1666.2	1410.8	1067.0	531.1	265.0	115.8	57.3
50°	1591.0	1599.4	1331.9	1077.8	706.6	559.8	424.9	267.3	127.7	60.8	34.6
52.5°	415.4	434.5	374.7	322.2	274.6	223.2	180.1	115.8	60.8	35.8	22.7
55°	98.0	101.5	94.2	88.3	83.6	73.9	65.6	50.1	33.5	22.7	14.4
57.5°	34.6	35.8	34.6	34.6	33.5	32.2	29.8	26.3	20.3	14.4	9.6
60°	15.5	16.7	15.5	16.7	16.7	16.7	16.7	16.7	12.0	8.3	5.9
62.5°	7.2	7.2	7.2	7.2	8.3	8.3	9.6	9.6	7.2	5.9	4.8
65°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	3.5
67.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
70°	3.5	3.5	3.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.5
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
75°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
77.5°	0.0	0.0	0.0	1.1	1.1	1.1	1.1	2.4	2.4	2.4	2.4
80°	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	2.4	2.4	2.4
82.5°	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	2.4	2.4	2.4
85°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	2.4	2.4	2.4
87.5°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	2.4	2.4	2.4
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6
2.5°	371.2	370.0	356.8	347.4	342.6	335.4	327.1	315.0	301.9	290.1	285.3
5°	451.2	435.7	408.2	385.5	374.7	364.1	345.0	323.4	303.1	281.6	270.9
7.5°	555.0	509.6	455.9	414.2	396.2	378.5	350.9	321.0	293.7	265.0	249.4
10°	697.0	592.0	499.0	432.1	405.8	381.9	342.6	305.4	275.7	244.6	224.4
12.5°	996.5	736.4	544.2	440.3	405.8	374.7	327.1	284.0	250.6	218.4	199.3
15°	1435.8	994.2	643.3	448.9	397.5	358.1	303.1	256.6	220.9	192.2	174.2
17.5°	1790.3	1231.7	766.3	470.3	386.7	335.4	272.2	223.2	189.8	163.5	149.2
20°	1969.3	1331.9	822.3	473.8	360.5	299.6	235.0	188.6	158.8	136.0	124.1
22.5°	1965.7	1299.7	772.2	415.4	316.3	259.0	198.1	155.2	131.4	113.4	103.8
25°	1841.6	1150.6	644.6	331.8	255.4	214.9	161.1	125.3	106.2	93.1	84.8
27.5°	1608.9	934.4	481.0	245.9	199.3	169.5	125.3	100.4	84.8	75.2	69.3
30°	1262.7	625.5	303.1	182.5	151.6	127.7	96.7	77.6	66.9	58.4	54.9
32.5°	695.9	325.8	204.2	133.7	111.0	93.1	71.7	56.1	48.9	43.0	41.7
35°	384.3	230.4	145.6	89.5	73.9	63.2	48.9	40.6	35.8	33.5	33.5
37.5°	272.2	148.0	87.2	56.1	47.7	41.7	33.5	28.7	27.6	26.3	26.3
40°	163.5	87.2	52.5	36.9	32.2	28.7	25.0	21.5	21.5	20.3	21.5
42.5°	89.5	52.5	35.8	26.3	22.7	21.5	17.9	16.7	16.7	16.7	17.9
45°	53.7	34.6	25.0	19.1	16.7	14.4	13.2	12.0	13.2	13.2	14.4
47.5°	34.6	25.0	16.7	12.0	10.8	9.6	8.3	9.6	9.6	10.8	12.0
50°	23.9	15.5	10.8	7.2	7.2	5.9	7.2	7.2	8.3	9.6	10.8
52.5°	15.5	10.8	7.2	5.9	4.8	4.8	4.8	5.9	7.2	8.3	9.6
55°	9.6	7.2	5.9	4.8	4.8	4.8	4.8	4.8	5.9	7.2	8.3
57.5°	7.2	5.9	4.8	3.5	3.5	3.5	4.8	4.8	5.9	5.9	7.2
60°	4.8	4.8	3.5	3.5	3.5	3.5	3.5	4.8	4.8	5.9	7.2
62.5°	4.8	4.8	3.5	3.5	3.5	3.5	4.8	4.8	4.8	5.9	5.9
65°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8	5.9
67.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	5.9
70°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	5.9
72.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
75°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8	4.8
77.5°	2.4	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8	4.8
80°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8	4.8
82.5°	2.4	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8	4.8
85°	2.4	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8	4.8
87.5°	2.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6
2.5°	279.3	270.9	263.7	266.1	261.4	252.9	250.6	244.6	237.5	236.4	236.4
5°	259.0	245.9	235.0	233.9	229.2	219.6	217.3	211.2	205.3	204.2	202.9
7.5°	233.9	219.6	210.1	207.7	204.2	195.7	194.5	188.6	185.0	182.5	182.5
10°	208.8	195.7	187.4	186.2	183.8	176.6	175.4	170.8	167.1	165.8	164.6
12.5°	185.0	174.2	167.1	165.8	163.5	157.6	156.4	152.8	150.4	149.2	149.2
15°	162.3	152.8	146.7	145.6	144.5	138.4	138.4	136.0	134.9	134.9	136.0
17.5°	139.7	131.4	126.5	125.3	125.3	120.5	121.7	120.5	120.5	120.5	122.9
20°	117.0	109.7	106.2	107.3	105.0	103.8	105.0	105.0	105.0	107.3	111.0
22.5°	98.0	91.9	88.3	89.5	89.5	88.3	89.5	90.7	93.1	96.7	100.4
25°	80.0	75.2	73.9	75.2	75.2	75.2	77.6	80.0	82.4	86.0	89.5
27.5°	64.5	60.8	60.8	62.1	63.2	63.2	66.9	69.3	72.8	76.3	80.0
30°	51.3	50.1	50.1	52.5	52.5	53.7	58.4	60.8	63.2	66.9	70.4
32.5°	40.6	40.6	41.7	44.2	44.2	46.6	50.1	52.5	54.9	58.4	62.1
35°	33.5	34.6	35.8	36.9	38.2	39.3	43.0	45.3	47.7	51.3	53.7
37.5°	27.6	28.7	29.8	32.2	32.2	33.5	36.9	39.3	40.6	44.2	47.7
40°	22.7	23.9	25.0	27.6	27.6	28.7	32.2	33.5	34.6	38.2	41.7
42.5°	19.1	20.3	21.5	22.7	23.9	25.0	27.6	28.7	31.1	33.5	35.8
45°	15.5	16.7	17.9	19.1	20.3	21.5	22.7	25.0	26.3	28.7	31.1
47.5°	13.2	14.4	15.5	16.7	17.9	17.9	20.3	21.5	22.7	25.0	27.6
50°	12.0	13.2	14.4	14.4	15.5	16.7	17.9	19.1	20.3	21.5	23.9
52.5°	9.6	10.8	12.0	13.2	13.2	14.4	15.5	16.7	17.9	19.1	20.3
55°	9.6	9.6	10.8	12.0	12.0	13.2	14.4	15.5	15.5	16.7	17.9
57.5°	8.3	9.6	9.6	10.8	10.8	12.0	13.2	13.2	14.4	14.4	15.5
60°	7.2	8.3	9.6	9.6	9.6	10.8	10.8	12.0	12.0	13.2	13.2
62.5°	7.2	8.3	8.3	9.6	9.6	9.6	10.8	10.8	10.8	12.0	12.0
65°	7.2	7.2	8.3	8.3	8.3	8.3	9.6	9.6	9.6	10.8	10.8
67.5°	5.9	7.2	7.2	7.2	8.3	8.3	8.3	8.3	8.3	9.6	9.6
70°	5.9	5.9	7.2	7.2	7.2	7.2	7.2	8.3	8.3	8.3	8.3
72.5°	5.9	5.9	5.9	5.9	7.2	7.2	7.2	7.2	7.2	7.2	7.2
75°	4.8	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
77.5°	4.8	4.8	4.8	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
80°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
82.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	3.5	3.5
85°	4.8	4.8	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
87.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	2.4	2.4	2.4
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: P1219553

CATALOG NUMBER: LDSQA4A25950D010TE LAR35FL 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	299.6	299.6	299.6	299.6	299.6	299.6	299.6	299.6
2.5°	231.6	229.2	228.0	231.6	226.8	229.2	228.0	229.2
5°	199.3	196.9	195.7	199.3	194.5	196.9	194.5	196.9
7.5°	179.0	177.8	176.6	179.0	175.4	177.8	176.6	177.8
10°	162.3	161.1	160.0	163.5	160.0	162.3	161.1	162.3
12.5°	148.0	148.0	146.7	149.2	146.7	149.2	148.0	149.2
15°	134.9	136.0	134.9	137.3	136.0	138.4	137.3	139.7
17.5°	124.1	125.3	125.3	128.9	127.7	131.4	130.1	131.4
20°	113.4	114.6	115.8	118.1	118.1	121.7	120.5	122.9
22.5°	102.6	105.0	105.0	108.6	108.6	112.1	112.1	113.4
25°	91.9	95.4	96.7	99.1	100.4	103.8	103.8	105.0
27.5°	83.6	86.0	87.2	90.7	91.9	95.4	95.4	98.0
30°	73.9	77.6	78.8	81.2	82.4	86.0	86.0	88.3
32.5°	65.6	68.0	70.4	72.8	73.9	77.6	77.6	80.0
35°	57.3	60.8	62.1	64.5	66.9	70.4	70.4	72.8
37.5°	50.1	53.7	54.9	57.3	59.6	63.2	63.2	65.6
40°	44.2	47.7	48.9	51.3	52.5	57.3	57.3	58.4
42.5°	39.3	41.7	43.0	45.3	46.6	48.9	48.9	51.3
45°	33.5	35.8	36.9	38.2	40.6	43.0	43.0	44.2
47.5°	28.7	31.1	32.2	33.5	34.6	36.9	36.9	39.3
50°	25.0	26.3	27.6	28.7	29.8	32.2	32.2	33.5
52.5°	21.5	22.7	23.9	25.0	26.3	27.6	28.7	29.8
55°	19.1	20.3	20.3	21.5	22.7	23.9	23.9	25.0
57.5°	16.7	17.9	17.9	17.9	19.1	20.3	20.3	21.5
60°	14.4	15.5	15.5	15.5	16.7	16.7	16.7	17.9
62.5°	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
65°	10.8	10.8	10.8	10.8	10.8	10.8	9.6	10.8
67.5°	9.6	9.6	9.6	8.3	8.3	8.3	8.3	8.3
70°	8.3	8.3	8.3	7.2	7.2	7.2	5.9	5.9
72.5°	7.2	7.2	7.2	5.9	5.9	5.9	4.8	4.8
75°	5.9	5.9	5.9	5.9	4.8	4.8	4.8	4.8
77.5°	4.8	4.8	4.8	4.8	4.8	4.8	3.5	3.5
80°	4.8	3.5	3.5	3.5	3.5	3.5	3.5	3.5
82.5°	3.5	3.5	3.5	3.5	2.4	2.4	2.4	2.4
85°	2.4	2.4	2.4	2.4	2.4	2.4	1.1	1.1
87.5°	2.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1
90°	0.0	0.0	0.0	0.0	0.0	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



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Peachtree City, GA 30269

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— 0°-180° - - 45°-225° - - - 90°-270°

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