

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: P1191466

Luminaire Tested: **LDA4A10935D010TE LAR25NF 4LLWW1**

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: P1191466
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26102)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A10935D010TE LAR25NF 4LLWW1
Description: PORTFOLIO 4" Lensed Wall Wash, Self-flanged, 25° Narrow Flood Optic,
at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

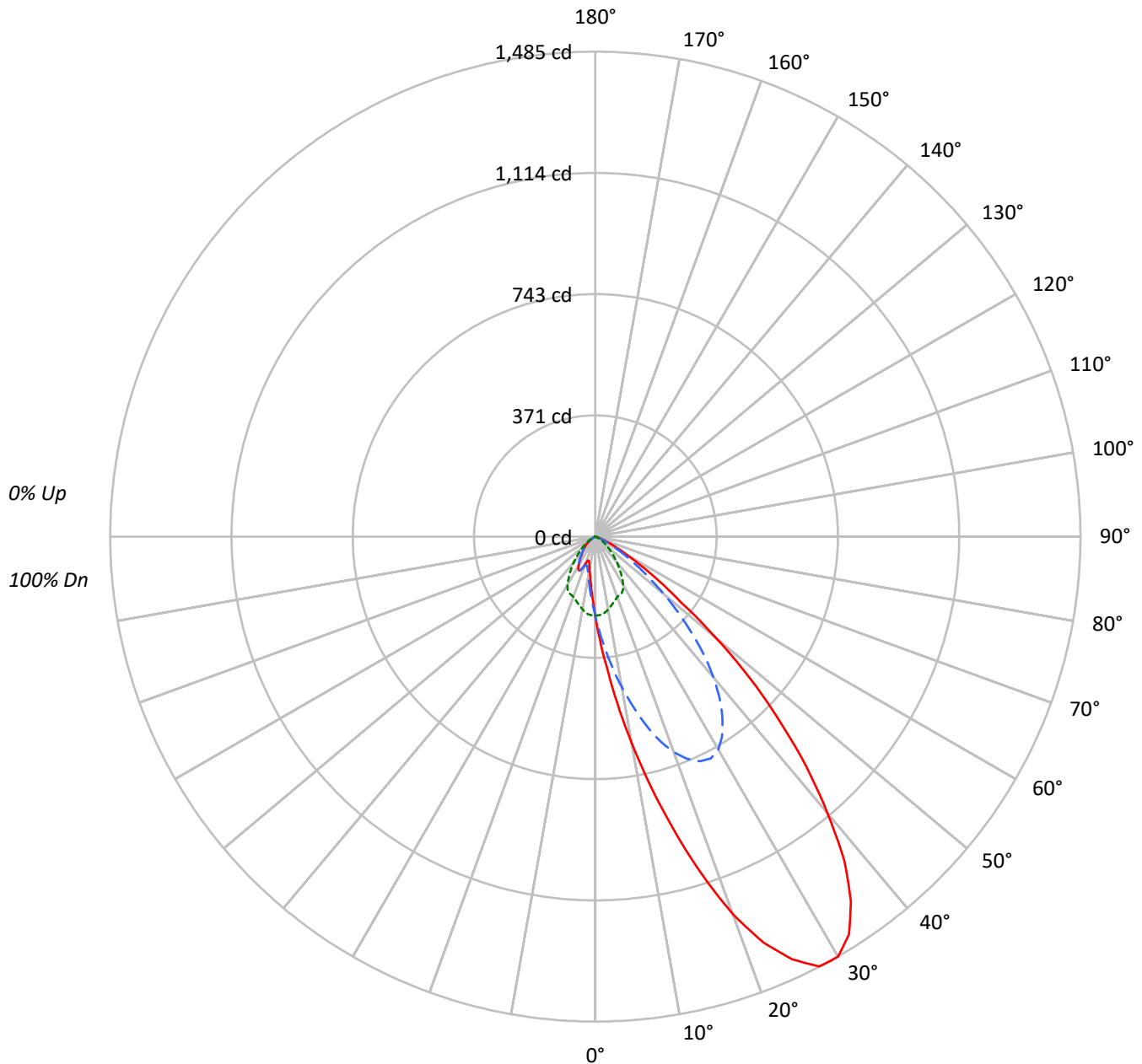
Lumens per Lamp: N/A
Luminaire Lumens: 872.8 lumens
Efficiency: N/A
Efficacy: 70.4 lumens/watt
Spacing Criteria (0/90/45): 2.11 / 1.09 / 1.54
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 12.4
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

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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	108	105	102	109	106	103	101	102	100	98		98	96	95		95
2	104	98	93	88	102	96	91	87	93	89	85		90	86	84		87
3	97	89	82	77	95	87	81	76	84	79	75		82	77	74		79
4	90	80	73	68	88	79	72	67	77	71	66		74	69	65		72
5	83	73	65	60	82	72	65	59	70	63	59		68	62	58		66
6	78	66	58	53	76	65	58	53	64	57	52		62	56	52		61
7	72	60	53	47	71	60	52	47	58	52	47		57	51	47		56
8	67	55	48	43	66	55	47	42	53	47	42		52	46	42		51
9	63	51	43	38	62	50	43	38	49	43	38		48	42	38		47
10	59	47	40	35	58	46	39	35	45	39	35		45	39	34		44

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	29850	29850	29850
5°	49663	29617	18647
10°	80384	28319	12587
15°	118886	26842	9794
20°	161504	25793	11551
25°	194428	25899	15692
30°	211561	24270	14642
35°	205372	20448	11715
40°	177907	16472	9597
45°	138712	12682	8216
50°	91993	9479	6332
55°	51310	6968	3785
60°	27062	4613	1529
65°	14564	2306	146
70°	6996	829	180
75°	2431	524	238
80°	781	781	0
85°	2406	1557	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.8	3.0
10°-20°	101.9	11.7
20°-30°	209.5	24.0
30°-40°	250.3	28.7
40°-50°	184.8	21.2
50°-60°	77.8	8.9
60°-70°	19.1	2.2
70°-80°	2.6	0.3
80°-90°	1.0	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°	337.2	38.6
0°-40°	587.5	67.3
0°-60°	850.1	97.4
0°-90°	872.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	872.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	242	242	242	242	242	
5°	401	345	239	172	151	46
15°	931	598	210	95	77	273
25°	1429	759	190	115	115	653
35°	1364	678	136	81	78	837
45°	795	418	73	48	47	611
55°	239	155	32	20	18	228
65°	50	34	8	2	0	54
75°	5	3	1	0	0	7
85°	2	2	1	0	0	2
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°	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0
2.5°	314.7	310.7	310.7	311.8	315.3	312.5	310.2	307.9	310.2	305.1	306.7
5°	401.1	400.5	400.5	395.9	400.0	400.5	395.9	391.9	393.1	385.7	385.7
7.5°	514.6	511.3	510.1	503.9	508.4	507.8	500.5	493.6	493.6	481.7	478.8
10°	641.8	637.4	635.1	627.1	631.1	628.9	618.0	607.8	605.0	588.0	581.7
12.5°	782.2	779.4	776.0	765.8	769.1	764.6	749.2	734.4	728.2	705.5	694.7
15°	931.0	935.6	929.8	918.0	920.3	912.3	892.4	872.0	862.3	831.6	815.7
17.5°	1084.3	1090.1	1083.8	1070.2	1069.6	1058.9	1031.6	1006.5	992.4	953.1	932.1
20°	1230.4	1232.1	1224.2	1209.4	1206.0	1191.2	1158.2	1123.1	1109.4	1061.2	1034.4
22.5°	1345.1	1351.3	1341.8	1330.9	1320.1	1301.4	1262.8	1224.2	1204.8	1149.7	1117.3
25°	1428.6	1442.8	1431.4	1419.0	1407.1	1384.9	1341.8	1300.2	1276.4	1215.0	1178.1
27.5°	1483.8	1497.4	1484.8	1470.7	1458.2	1432.6	1385.5	1345.7	1316.7	1249.7	1209.9
30°	1485.4	1501.9	1488.9	1473.5	1461.6	1436.0	1387.8	1346.9	1314.5	1247.4	1206.0
32.5°	1444.6	1457.6	1444.6	1431.4	1417.8	1393.4	1345.1	1306.0	1271.8	1207.6	1166.2
35°	1363.9	1375.3	1362.1	1346.9	1337.2	1315.7	1269.5	1232.1	1198.0	1139.0	1102.6
37.5°	1252.5	1262.8	1250.8	1242.3	1228.1	1208.8	1166.8	1133.3	1100.9	1047.5	1015.1
40°	1104.9	1126.4	1115.0	1109.4	1096.3	1079.9	1042.9	1013.4	983.8	937.2	910.6
42.5°	957.1	977.6	967.4	963.5	952.0	937.9	907.2	882.2	854.9	816.2	793.5
45°	795.2	816.9	807.2	805.5	795.8	785.0	752.1	739.0	715.2	678.8	668.1
47.5°	643.0	647.1	637.9	638.5	631.7	624.3	597.6	589.6	577.6	549.9	537.4
50°	479.4	482.2	474.9	477.1	472.6	468.1	449.9	445.9	438.6	419.8	412.4
52.5°	330.0	343.1	337.9	340.2	337.9	336.3	328.9	322.1	318.7	306.7	303.3
55°	238.6	239.7	235.8	238.1	236.3	235.8	231.2	227.2	225.5	218.1	217.0
57.5°	165.3	166.5	166.5	165.3	164.7	163.5	160.7	158.5	157.3	155.7	152.2
60°	109.7	114.1	112.5	113.6	113.0	113.0	110.8	109.0	108.5	105.1	105.1
62.5°	75.0	77.8	76.7	77.3	76.7	76.7	75.0	73.9	73.9	73.2	71.6
65°	49.9	51.7	50.6	51.1	51.1	51.1	49.9	48.9	48.9	48.3	47.1
67.5°	31.8	33.0	32.4	33.0	32.4	33.0	31.8	31.2	30.7	30.7	30.1
70°	19.4	19.9	19.4	19.9	19.4	19.4	18.7	18.7	18.2	17.6	17.6
72.5°	10.2	10.8	10.8	10.8	10.8	10.8	10.2	9.7	9.7	9.7	9.0
75°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.6	4.6	4.6
77.5°	2.3	2.3	2.3	2.3	2.8	2.3	2.3	2.3	2.3	2.3	2.3
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
85°	1.7	1.7	1.7	1.7	1.7	1.7	2.3	2.3	2.3	2.3	1.7
87.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.8	2.8	2.3	2.3
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°	47.5°	50°	52.5°
0°	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0
2.5°	302.3	299.3	298.2	295.9	293.1	291.4	289.7	290.3	286.3	283.4	279.5
5°	378.3	372.1	368.6	363.5	357.3	352.2	347.6	345.3	337.9	332.8	322.1
7.5°	468.1	457.3	450.4	441.4	430.5	421.5	412.4	406.2	394.7	385.2	368.6
10°	566.3	549.9	537.9	524.3	507.8	493.1	479.4	468.1	451.0	436.3	414.7
12.5°	673.7	650.4	633.3	613.4	590.3	569.7	545.3	532.3	509.0	488.5	460.7
15°	787.9	757.2	733.3	706.0	675.5	648.1	616.9	597.6	566.9	540.8	506.2
17.5°	897.5	858.9	827.7	793.0	755.0	719.7	682.7	655.5	618.0	585.7	544.1
20°	992.9	946.9	908.8	866.8	822.0	778.8	738.5	702.1	658.4	620.3	573.2
22.5°	1070.7	1017.3	973.7	924.7	873.0	824.2	778.3	736.7	686.8	644.8	593.1
25°	1127.0	1068.5	1019.6	965.6	908.8	853.2	804.4	758.9	704.4	659.5	604.4
27.5°	1156.6	1094.7	1042.9	985.0	924.7	866.8	814.1	765.8	708.3	661.2	604.4
30°	1151.5	1088.4	1034.9	975.3	914.6	856.6	801.6	753.2	694.2	646.4	589.6
32.5°	1112.2	1050.3	998.1	940.2	880.4	824.2	769.1	722.6	663.5	616.9	561.9
35°	1047.5	988.9	939.5	884.5	828.2	775.3	725.4	678.3	621.5	577.1	525.4
37.5°	963.5	910.0	865.1	814.1	762.3	714.6	665.2	624.9	574.3	532.8	482.2
40°	862.8	815.7	776.0	730.5	683.9	642.5	601.0	561.9	512.4	475.5	432.3
42.5°	752.1	711.8	677.6	637.9	597.6	562.4	526.6	492.6	451.5	418.0	377.8
45°	632.8	598.7	570.9	539.1	505.6	472.6	446.4	418.0	380.0	355.0	321.0
47.5°	509.5	483.4	462.4	437.9	411.3	390.8	365.8	343.1	315.3	291.9	264.2
50°	392.6	374.4	359.6	342.5	323.3	304.4	289.7	272.1	251.1	232.3	210.2
52.5°	290.3	278.3	269.3	257.9	244.8	235.1	221.5	208.5	192.6	178.3	161.4
55°	207.9	201.1	195.4	188.6	179.5	170.9	164.2	155.0	143.7	133.0	120.4
57.5°	149.4	142.0	141.4	134.0	130.7	124.4	118.2	111.3	103.4	96.0	86.9
60°	103.4	98.3	96.0	93.1	89.2	85.2	82.4	77.8	72.1	67.0	60.2
62.5°	69.9	66.5	65.3	64.2	60.8	59.1	55.7	52.9	48.9	44.8	40.4
65°	46.0	43.7	42.5	40.9	39.2	38.1	36.3	34.1	30.7	28.4	25.6
67.5°	28.9	27.3	26.1	25.6	23.8	23.3	21.5	20.5	18.2	17.1	15.3
70°	16.4	15.9	14.8	14.8	13.6	12.5	12.0	10.8	10.2	9.0	8.5
72.5°	8.5	8.5	7.9	7.4	6.9	6.9	6.2	5.7	5.1	4.6	4.6
75°	3.9	3.9	3.9	3.4	3.4	3.4	2.8	2.8	2.8	2.3	2.3
77.5°	2.3	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.1	1.1
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	1.7	1.1	1.1	1.1	1.1	1.7	1.7	1.7	1.7	1.7	1.7
87.5°	1.7	1.7	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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):

	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°	77.5°	80°
0°	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0
2.5°	276.7	275.5	272.7	272.1	265.8	264.7	261.2	256.2	252.2	251.1	252.2
5°	318.1	313.0	304.4	302.8	292.6	289.1	281.8	273.9	267.0	263.0	261.2
7.5°	360.7	352.2	339.7	333.5	318.7	311.3	300.5	289.1	278.3	270.9	266.5
10°	401.6	388.0	365.3	360.1	342.0	330.0	315.3	300.0	286.3	276.0	268.6
12.5°	440.2	423.8	400.5	386.3	362.4	347.1	328.4	309.6	292.6	279.0	268.6
15°	479.9	458.4	429.4	409.5	382.3	361.9	339.1	317.5	297.7	280.6	268.1
17.5°	512.9	486.2	452.2	428.4	396.5	372.1	346.0	321.0	299.3	280.1	265.8
20°	537.4	506.2	467.5	439.7	404.4	377.2	348.8	321.5	297.7	276.7	261.2
22.5°	553.8	518.0	476.0	445.3	408.4	378.9	348.2	319.8	295.4	273.9	257.3
25°	561.9	523.1	479.4	446.4	407.9	377.2	345.3	316.4	291.4	269.3	253.3
27.5°	560.7	519.8	474.9	440.2	401.1	369.3	336.9	307.9	283.4	261.2	244.8
30°	544.1	503.9	458.4	423.1	384.5	352.7	320.3	291.9	268.1	245.5	230.0
32.5°	518.7	477.1	432.8	393.7	360.7	329.5	298.8	269.8	247.1	224.9	210.2
35°	484.0	444.2	401.6	368.1	332.3	302.3	272.7	245.5	223.8	202.3	188.6
37.5°	443.6	405.6	366.3	331.7	300.5	272.7	244.8	220.4	198.8	179.5	166.5
40°	397.0	361.9	326.1	296.5	265.8	240.2	214.8	190.8	173.2	155.7	144.3
42.5°	346.5	315.3	282.9	257.3	229.5	206.7	182.4	165.3	148.3	132.3	123.3
45°	293.7	266.5	239.2	215.9	193.1	173.2	152.2	136.3	123.3	110.2	102.3
47.5°	241.4	218.1	196.0	177.2	157.3	140.9	126.1	112.0	99.4	88.7	82.4
50°	188.6	173.2	155.7	140.4	124.4	110.8	97.2	86.9	77.3	69.3	65.3
52.5°	147.1	133.0	118.7	106.2	94.9	83.6	74.4	65.9	59.1	54.0	51.1
55°	109.7	98.3	87.5	77.8	68.8	61.4	55.2	49.9	45.5	41.5	40.4
57.5°	78.3	69.9	62.5	55.2	49.4	44.8	40.9	37.4	34.6	31.8	31.2
60°	54.5	48.3	43.7	39.2	35.8	32.4	30.1	27.9	25.6	23.8	23.3
62.5°	36.3	33.0	29.6	27.3	25.6	22.7	21.5	19.9	18.7	17.1	16.4
65°	23.3	21.0	19.4	17.6	16.4	15.3	14.1	13.1	12.0	10.8	10.8
67.5°	14.1	12.5	12.0	10.8	9.7	9.0	8.5	7.4	6.9	6.9	6.2
70°	7.9	6.9	6.2	5.7	5.1	5.1	4.6	3.9	3.9	3.4	3.4
72.5°	3.9	3.9	3.4	3.4	2.8	2.8	2.3	2.3	2.3	1.7	1.7
75°	2.3	2.3	1.7	1.7	1.7	1.7	1.7	1.7	1.1	1.1	1.1
77.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
85°	1.7	1.7	1.7	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1
87.5°	1.7	1.7	1.7	1.7	1.7	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	0.0	0.0	0.0

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TEST NUMBER: P1191466

CATALOG NUMBER: LDA4A10935D010TE LAR25NF 4LLWW1

CANDELA DISTRIBUTION (continued):

	82.5°	85°	87.5°	90°	112.5°	135°	157.5°	180°
0°	242.0	242.0	242.0	242.0	242.0	242.0	242.0	242.0
2.5°	247.6	242.0	240.9	240.9	217.0	202.8	192.0	189.2
5°	253.3	245.5	241.4	239.2	196.5	171.6	155.0	150.6
7.5°	256.2	244.8	238.6	233.5	176.7	144.3	126.6	121.5
10°	255.0	241.4	232.8	226.1	158.5	123.3	105.1	100.5
12.5°	252.8	237.4	226.6	218.1	143.2	106.7	90.3	85.7
15°	250.5	232.8	220.4	210.2	130.7	95.4	80.6	76.7
17.5°	246.0	227.7	213.6	202.8	122.7	90.9	78.3	76.2
20°	240.9	222.1	207.4	196.5	120.4	95.4	88.0	88.0
22.5°	237.4	218.1	203.9	193.1	124.4	106.2	103.4	105.1
25°	232.8	214.8	200.5	190.3	128.4	114.8	113.0	115.3
27.5°	225.5	207.4	193.7	183.4	126.1	113.6	112.0	113.0
30°	210.8	193.1	181.3	170.4	117.1	105.1	102.3	102.8
32.5°	192.0	175.0	163.5	153.4	103.9	92.6	89.8	89.8
35°	171.6	155.7	144.8	135.8	91.5	81.3	78.3	77.8
37.5°	151.1	136.3	127.2	118.7	80.1	70.9	68.1	67.6
40°	130.7	117.6	109.0	102.3	70.4	63.1	60.2	59.6
42.5°	111.3	100.0	92.6	86.9	61.4	55.7	53.4	52.9
45°	92.0	82.9	77.3	72.7	53.4	47.8	47.1	47.1
47.5°	74.4	67.0	63.1	60.2	45.5	40.9	40.4	40.9
50°	59.6	54.5	51.7	49.4	38.6	34.6	33.0	33.0
52.5°	47.1	43.7	42.0	40.4	31.8	27.9	25.6	25.0
55°	37.4	34.6	33.5	32.4	25.0	20.5	18.2	17.6
57.5°	29.6	27.3	26.1	25.0	18.7	14.1	12.0	11.3
60°	22.2	20.5	19.4	18.7	13.1	8.5	6.9	6.2
62.5°	15.9	14.8	13.6	13.1	7.9	4.6	2.8	2.3
65°	9.7	9.7	8.5	7.9	3.9	1.7	1.1	0.5
67.5°	5.7	5.1	4.6	4.6	1.7	1.1	0.5	0.5
70°	2.8	2.8	2.3	2.3	1.1	0.5	0.5	0.5
72.5°	1.7	1.7	1.7	1.1	1.1	0.5	0.5	0.5
75°	1.1	1.1	1.1	1.1	1.1	0.5	0.5	0.5
77.5°	1.1	1.1	1.1	1.1	1.1	0.5	0.5	0.0
80°	1.1	1.1	1.1	1.1	1.1	0.5	0.5	0.0
82.5°	1.1	1.1	1.1	1.1	1.1	0.5	0.5	0.5
85°	1.1	1.1	1.1	1.1	1.1	0.5	0.5	0.0
87.5°	1.1	1.1	1.1	1.1	1.1	0.5	0.5	0.5
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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1121 Highway 74 South

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— 0°-180° - - 45°-225° - - - 90°-270°

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