

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: P1191430

Luminaire Tested: **LDA4A10927D010TE 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: P1191430
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: LDA4A10927D010TE LAR25NF 4LLWW1
Description: PORTFOLIO 4" Lensed Wall Wash, Self-flanged, 25° Narrow Flood Optic,
at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

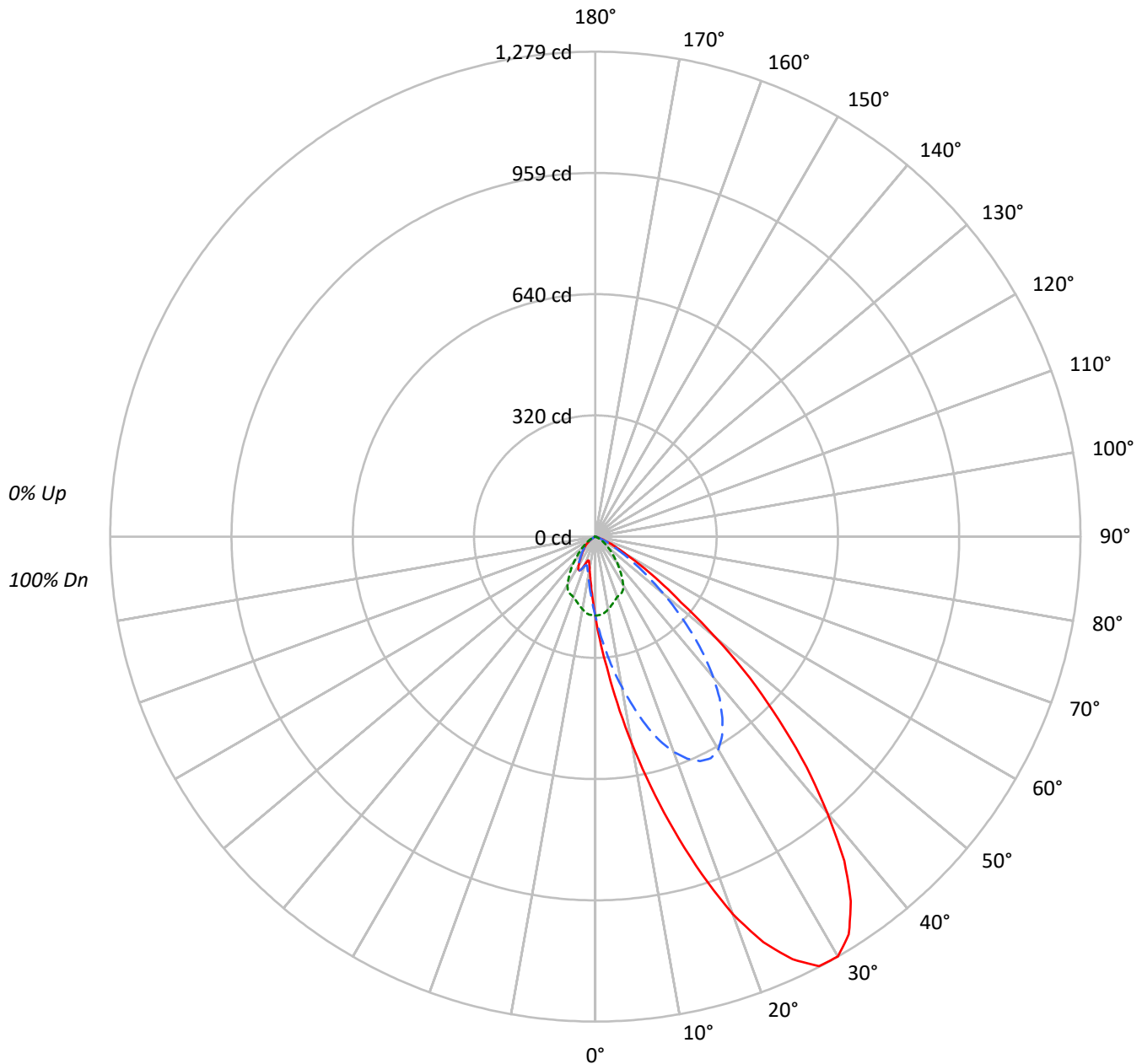
Lumens per Lamp: N/A
Luminaire Lumens: 751.4 lumens
Efficiency: N/A
Efficacy: 60.6 lumens/watt
Spacing Criteria (0/90/45): 2.11 / 1.09 / 1.54
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	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	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90		
2	104	98	93	88	102	96	91	87	93	89	85	90	86	84	87	84	82	80		
3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71		
4	90	80	73	67	88	79	72	67	77	71	66	74	69	65	72	68	65	63		
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56		
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	52	50		
7	72	60	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	45		
8	67	55	48	43	66	55	47	42	53	47	42	52	46	42	51	46	42	40		
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38	36		
10	59	47	40	35	58	46	39	35	45	39	35	45	39	34	44	38	34	33		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	25693	25693	25693
5°	42742	25481	16034
10°	69212	24373	10847
15°	102336	23100	8428
20°	139019	22209	9950
25°	167372	22293	13501
30°	182122	20894	12605
35°	176793	17602	10089
40°	153143	14169	8260
45°	119420	10902	7082
50°	79194	8155	5450
55°	44149	6000	3269
60°	23288	3996	1307
65°	12579	2014	146
70°	6023	685	180
75°	2145	477	238
80°	710	710	0
85°	2123	1415	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.2	3.0
10°-20°	87.7	11.7
20°-30°	180.4	24.0
30°-40°	215.4	28.7
40°-50°	159.1	21.2
50°-60°	67.0	8.9
60°-70°	16.5	2.2
70°-80°	2.3	0.3
80°-90°	0.9	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°	290.3	38.6
0°-40°	505.7	67.3
0°-60°	731.8	97.4
0°-90°	751.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	751.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	208	208	208	208	208	
5°	345	297	206	148	130	39
15°	801	514	181	82	66	235
25°	1230	653	164	99	99	562
35°	1174	584	117	70	67	720
45°	685	360	62	41	41	526
55°	205	134	28	18	15	196
65°	43	29	7	2	0	47
75°	4	2	1	0	0	6
85°	2	2	1	0	0	1
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°	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3
2.5°	270.9	267.5	267.5	268.5	271.4	268.9	267.0	265.1	267.0	262.6	264.0
5°	345.2	344.8	344.8	340.9	344.3	344.8	340.9	337.4	338.4	332.1	332.1
7.5°	443.0	440.1	439.1	433.7	437.7	437.2	430.8	424.9	424.9	414.7	412.2
10°	552.6	548.6	546.7	539.8	543.3	541.3	532.0	523.3	520.8	506.1	500.7
12.5°	673.3	670.9	668.0	659.2	662.1	658.1	645.0	632.3	626.9	607.3	598.0
15°	801.4	805.4	800.6	790.2	792.1	785.4	768.2	750.6	742.3	715.8	702.2
17.5°	933.5	938.4	933.0	921.3	920.8	911.5	888.1	866.5	854.3	820.5	802.5
20°	1059.1	1060.7	1053.8	1041.0	1038.1	1025.5	997.1	966.8	955.1	913.4	890.5
22.5°	1158.0	1163.3	1155.0	1145.7	1136.4	1120.3	1087.0	1053.8	1037.2	989.7	961.8
25°	1229.8	1242.0	1232.2	1221.5	1211.2	1192.2	1155.0	1119.4	1098.7	1046.0	1014.2
27.5°	1277.3	1289.0	1278.2	1266.0	1255.3	1233.2	1192.6	1158.5	1133.5	1075.8	1041.5
30°	1278.7	1293.0	1281.6	1268.5	1258.2	1236.2	1194.7	1159.4	1131.6	1073.9	1038.1
32.5°	1243.6	1254.8	1243.6	1232.2	1220.5	1199.5	1158.0	1124.2	1094.9	1039.6	1004.0
35°	1174.1	1183.8	1172.6	1159.4	1151.1	1132.5	1092.9	1060.7	1031.4	980.4	949.2
37.5°	1078.2	1087.0	1076.8	1069.4	1057.2	1040.7	1004.4	975.6	947.7	901.7	873.8
40°	951.1	969.7	959.9	955.1	943.7	929.6	897.9	872.4	846.9	806.8	783.9
42.5°	824.0	841.6	832.8	829.3	819.5	807.3	780.9	759.4	736.0	702.7	683.1
45°	684.6	703.2	694.8	693.4	685.2	675.9	647.4	636.2	615.6	584.4	575.1
47.5°	553.6	557.0	549.1	549.6	543.8	537.4	514.5	507.6	497.3	473.3	462.6
50°	412.7	415.1	408.7	410.8	406.8	402.9	387.3	383.9	377.5	361.4	355.0
52.5°	284.2	295.4	290.9	293.0	290.9	289.5	283.2	277.3	274.4	264.0	261.1
55°	205.3	206.3	202.9	204.9	203.4	202.9	199.1	195.6	194.1	187.8	186.9
57.5°	142.3	143.3	143.3	142.3	141.8	140.9	138.3	136.4	135.4	134.0	131.1
60°	94.4	98.3	96.8	97.8	97.3	97.3	95.4	93.9	93.4	90.4	90.4
62.5°	64.6	67.0	66.0	66.5	66.0	66.0	64.6	63.6	63.6	63.1	61.6
65°	43.1	44.5	43.6	44.1	44.1	44.1	43.1	42.0	42.0	41.5	40.6
67.5°	27.4	28.4	27.9	28.4	27.9	28.4	27.4	26.9	26.4	26.4	25.9
70°	16.7	17.1	16.7	17.1	16.7	16.7	16.2	16.2	15.7	15.2	15.2
72.5°	8.8	9.3	9.3	9.3	9.3	9.3	8.8	8.3	8.3	8.3	7.8
75°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	3.9	3.9	3.9
77.5°	1.9	1.9	1.9	1.9	2.4	1.9	1.9	1.9	1.9	1.9	1.9
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	1.5	1.5	1.5	1.5	1.5	1.5	1.9	1.9	1.9	1.9	1.5
87.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.4	2.4	1.9	1.9
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°	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3
2.5°	260.1	257.7	256.8	254.8	252.3	250.8	249.4	249.9	246.5	244.1	240.6
5°	325.7	320.3	317.4	313.0	307.6	303.2	299.3	297.3	290.9	286.6	277.3
7.5°	402.9	393.6	387.7	380.0	370.7	362.9	355.0	349.6	339.8	331.6	317.4
10°	487.6	473.3	463.1	451.3	437.2	424.4	412.7	402.9	388.2	375.5	357.0
12.5°	579.9	559.9	545.3	528.1	508.1	490.5	469.5	458.2	438.2	420.6	396.5
15°	678.3	651.8	631.3	607.8	581.5	557.9	531.0	514.5	488.0	465.6	435.7
17.5°	772.7	739.4	712.5	682.6	649.9	619.6	587.8	564.3	532.0	504.2	468.5
20°	854.8	815.2	782.5	746.2	707.6	670.4	635.7	604.4	566.7	534.0	493.5
22.5°	921.8	875.8	838.1	796.1	751.6	709.5	670.0	634.2	591.1	555.0	510.5
25°	970.2	919.8	877.7	831.2	782.5	734.4	692.4	653.3	606.3	567.7	520.3
27.5°	995.6	942.3	897.9	847.9	796.1	746.2	700.7	659.2	609.7	569.2	520.3
30°	991.2	937.0	891.0	839.7	787.3	737.4	690.0	648.5	597.5	556.5	507.6
32.5°	957.5	904.1	859.1	809.3	758.0	709.5	662.1	622.0	571.1	531.0	483.6
35°	901.7	851.4	808.8	761.3	712.9	667.4	624.4	583.9	535.0	496.8	452.3
37.5°	829.3	783.4	744.8	700.7	656.2	615.2	572.7	537.9	494.3	458.7	415.1
40°	742.9	702.2	668.0	628.9	588.7	553.1	517.4	483.6	441.1	409.3	372.2
42.5°	647.4	612.7	583.4	549.1	514.5	484.2	453.3	423.9	388.7	360.0	325.2
45°	544.8	515.4	491.4	464.0	435.2	406.8	384.4	360.0	327.1	305.6	276.3
47.5°	438.7	416.1	398.0	377.0	354.0	336.4	314.9	295.4	271.4	251.3	227.4
50°	337.9	322.3	309.5	294.9	278.2	262.1	249.4	234.2	216.2	200.0	180.9
52.5°	249.9	239.6	231.8	222.0	210.8	202.4	190.7	179.5	165.7	153.5	138.8
55°	179.0	173.1	168.3	162.4	154.5	147.2	141.3	133.5	123.7	114.4	103.7
57.5°	128.6	122.3	121.8	115.4	112.5	107.1	101.8	95.8	89.0	82.7	74.8
60°	89.0	84.6	82.7	80.2	76.8	73.4	70.9	67.0	62.2	57.7	51.8
62.5°	60.1	57.2	56.2	55.3	52.4	50.8	47.9	45.5	42.0	38.6	34.8
65°	39.6	37.7	36.7	35.2	33.8	32.7	31.3	29.3	26.4	24.5	22.0
67.5°	25.0	23.4	22.5	22.0	20.5	20.0	18.6	17.6	15.7	14.6	13.2
70°	14.1	13.6	12.7	12.7	11.7	10.7	10.3	9.3	8.8	7.8	7.4
72.5°	7.4	7.4	6.9	6.4	5.9	5.9	5.3	4.8	4.5	3.9	3.9
75°	3.4	3.4	3.4	2.9	2.9	2.9	2.4	2.4	2.4	1.9	1.9
77.5°	1.9	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	1.5	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5
87.5°	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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°	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3
2.5°	238.2	237.2	234.8	234.2	228.9	227.9	224.9	220.5	217.2	216.2	217.2
5°	273.9	269.4	262.1	260.6	251.8	248.9	242.5	235.6	229.8	226.3	224.9
7.5°	310.5	303.2	292.5	287.1	274.4	268.0	258.7	248.9	239.6	233.2	229.4
10°	345.7	334.0	314.5	310.0	294.4	284.2	271.4	258.2	246.5	237.7	231.3
12.5°	378.9	364.8	344.8	332.6	311.9	298.8	282.6	266.5	251.8	240.1	231.3
15°	413.2	394.6	369.6	352.6	329.1	311.4	291.9	273.3	256.3	241.6	230.8
17.5°	441.6	418.6	389.3	368.8	341.4	320.3	297.8	276.3	257.7	241.1	228.9
20°	462.6	435.7	402.5	378.4	348.1	324.7	300.2	276.8	256.3	238.2	224.9
22.5°	476.8	445.9	409.8	383.4	351.6	326.2	299.7	275.3	254.2	235.6	221.5
25°	483.6	450.4	412.7	384.4	351.0	324.7	297.3	272.3	250.8	231.8	218.1
27.5°	482.6	447.5	408.7	378.9	345.2	317.8	290.0	265.1	244.1	224.9	210.8
30°	468.5	433.7	394.6	364.3	331.0	303.7	275.8	251.3	230.8	211.2	198.1
32.5°	446.4	410.8	372.6	338.8	310.5	283.7	257.2	232.3	212.7	193.6	180.9
35°	416.6	382.4	345.7	316.9	286.1	260.1	234.8	211.2	192.7	174.1	162.4
37.5°	381.9	349.1	315.4	285.6	258.7	234.8	210.8	189.8	171.2	154.5	143.3
40°	341.9	311.4	280.7	255.3	228.9	206.9	184.8	164.3	149.2	134.0	124.2
42.5°	298.3	271.4	243.5	221.5	197.6	177.9	156.9	142.3	127.6	114.0	106.1
45°	252.8	229.4	205.8	185.8	166.2	149.2	131.1	117.3	106.1	94.9	88.0
47.5°	207.9	187.8	168.6	152.6	135.4	121.3	108.5	96.3	85.6	76.3	70.9
50°	162.4	149.2	134.0	120.8	107.1	95.4	83.6	74.8	66.5	59.6	56.2
52.5°	126.6	114.4	102.2	91.5	81.6	71.8	64.1	56.7	50.8	46.5	44.1
55°	94.4	84.6	75.3	67.0	59.2	52.9	47.4	43.1	39.1	35.7	34.8
57.5°	67.5	60.1	53.8	47.4	42.5	38.6	35.2	32.2	29.8	27.4	26.9
60°	47.0	41.5	37.7	33.8	30.8	27.9	25.9	23.9	22.0	20.5	20.0
62.5°	31.3	28.4	25.5	23.4	22.0	19.6	18.6	17.1	16.2	14.6	14.1
65°	20.0	18.1	16.7	15.2	14.1	13.2	12.2	11.2	10.3	9.3	9.3
67.5°	12.2	10.7	10.3	9.3	8.3	7.8	7.4	6.4	5.9	5.9	5.3
70°	6.9	5.9	5.3	4.8	4.5	4.5	3.9	3.4	3.4	2.9	2.9
72.5°	3.4	3.4	2.9	2.9	2.4	2.4	1.9	1.9	1.9	1.5	1.5
75°	1.9	1.9	1.5	1.5	1.5	1.5	1.5	1.5	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	1.5	1.5	1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
87.5°	1.5	1.5	1.5	1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0
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):

	82.5°	85°	87.5°	90°	112.5°	135°	157.5°	180°
0°	208.3	208.3	208.3	208.3	208.3	208.3	208.3	208.3
2.5°	213.2	208.3	207.4	207.4	186.9	174.6	165.3	162.8
5°	218.1	211.2	207.9	205.8	169.2	147.6	133.5	129.5
7.5°	220.5	210.8	205.3	201.0	152.1	124.2	109.0	104.7
10°	219.6	207.9	200.5	194.6	136.4	106.1	90.4	86.6
12.5°	217.6	204.4	195.1	187.8	123.2	92.0	77.7	73.9
15°	215.6	200.5	189.8	180.9	112.5	82.2	69.4	66.0
17.5°	211.7	196.0	183.8	174.6	105.6	78.2	67.5	65.5
20°	207.4	191.2	178.5	169.2	103.7	82.2	75.8	75.8
22.5°	204.4	187.8	175.5	166.2	107.1	91.5	89.0	90.4
25°	200.5	184.8	172.6	163.8	110.6	98.7	97.3	99.2
27.5°	194.1	178.5	166.7	157.9	108.5	97.8	96.3	97.3
30°	181.4	166.2	156.0	146.7	100.8	90.4	88.0	88.5
32.5°	165.3	150.6	140.9	132.1	89.5	79.7	77.3	77.3
35°	147.6	134.0	124.7	116.9	78.7	69.9	67.5	67.0
37.5°	130.0	117.3	109.5	102.2	68.9	61.1	58.7	58.2
40°	112.5	101.3	93.9	88.0	60.6	54.3	51.8	51.3
42.5°	95.8	86.1	79.7	74.8	52.9	47.9	46.0	45.5
45°	79.2	71.5	66.5	62.5	46.0	41.0	40.6	40.6
47.5°	64.1	57.7	54.3	51.8	39.1	35.2	34.8	35.2
50°	51.3	47.0	44.5	42.5	33.2	29.8	28.4	28.4
52.5°	40.6	37.7	36.2	34.8	27.4	23.9	22.0	21.5
55°	32.2	29.8	28.9	27.9	21.5	17.6	15.7	15.2
57.5°	25.5	23.4	22.5	21.5	16.2	12.2	10.3	9.8
60°	19.1	17.6	16.7	16.2	11.2	7.4	5.9	5.3
62.5°	13.6	12.7	11.7	11.2	6.9	3.9	2.4	1.9
65°	8.3	8.3	7.4	6.9	3.4	1.5	1.0	0.5
67.5°	4.8	4.5	3.9	3.9	1.5	1.0	0.5	0.5
70°	2.4	2.4	1.9	1.9	1.0	0.5	0.5	0.5
72.5°	1.5	1.5	1.5	1.0	1.0	0.5	0.5	0.5
75°	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5
77.5°	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.0
80°	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.0
82.5°	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5
85°	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.0
87.5°	1.0	1.0	1.0	1.0	1.0	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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(END OF REPORT)