

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: P1191448

Luminaire Tested: **LDA4A10930D010TE 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: P1191448
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: LDA4A10930D010TE LAR25NF 4LLWW1
Description: PORTFOLIO 4" Lensed Wall Wash, Self-flanged, 25° Narrow Flood Optic,
at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

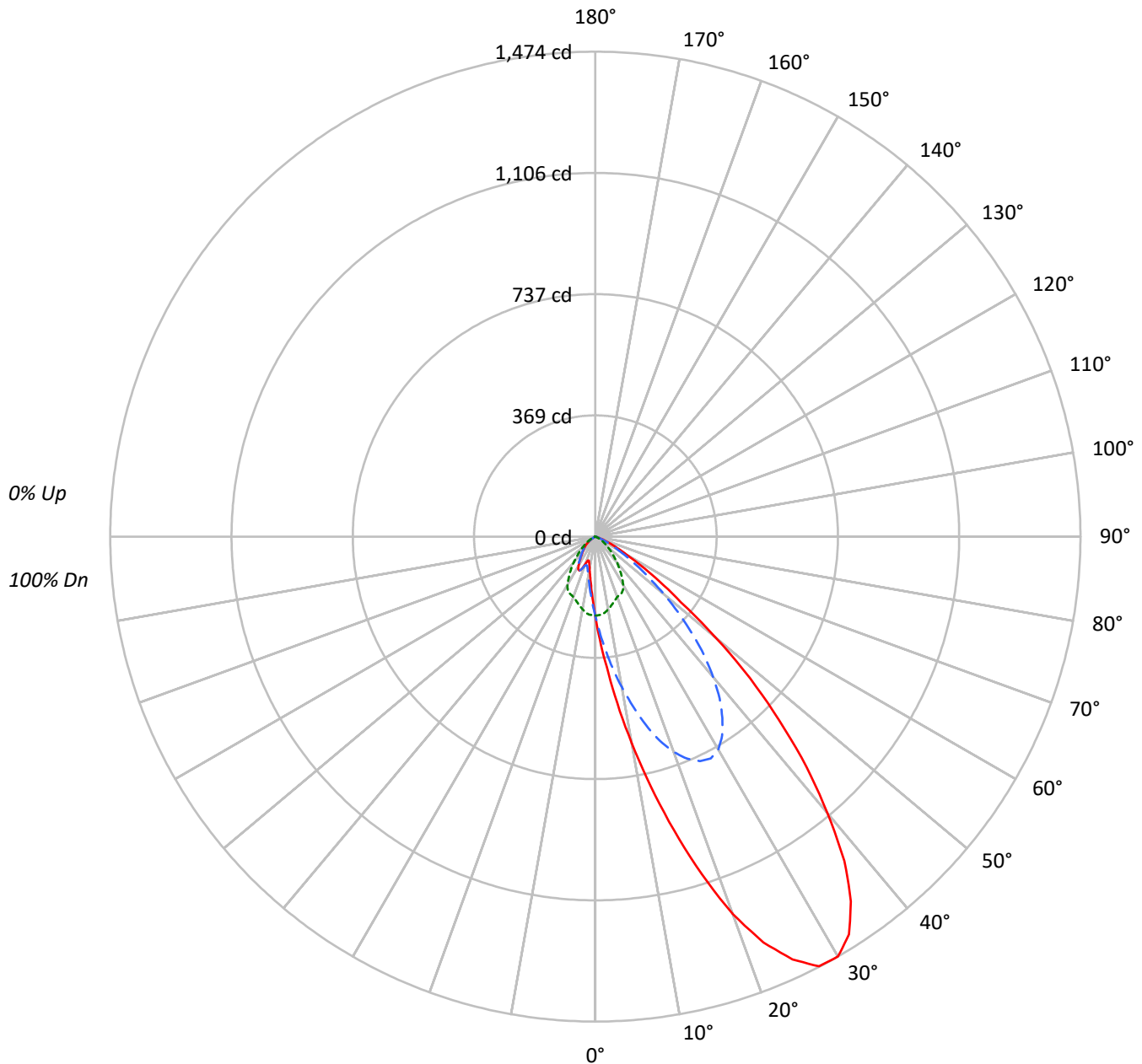
Lumens per Lamp: N/A
Luminaire Lumens: 866.1 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Spacing Criteria (0/90/45): 2.11 / 1.09 / 1.54
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	29615	29615	29615
5°	49267	29382	18498
10°	79783	28093	12487
15°	117979	26625	9705
20°	160271	25596	11472
25°	192944	25709	15569
30°	209952	24099	14528
35°	203806	20298	11625
40°	176538	16343	9532
45°	137666	12577	8146
50°	91283	9403	6275
55°	50923	6903	3763
60°	26840	4588	1529
65°	14447	2306	146
70°	6888	829	180
75°	2431	524	238
80°	781	781	0
85°	2406	1557	0

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.6	3.0
10°-20°	101.1	11.7
20°-30°	207.9	24.0
30°-40°	248.3	28.7
40°-50°	183.4	21.2
50°-60°	77.2	8.9
60°-70°	19.0	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°	334.6	38.6
0°-40°	583.0	67.3
0°-60°	843.5	97.4
0°-90°	866.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	866.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	240	240	240	240	240	
5°	398	343	237	170	149	46
15°	924	593	208	95	76	271
25°	1418	753	189	114	114	648
35°	1354	673	135	81	77	830
45°	789	415	72	47	47	606
55°	237	154	32	20	18	226
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°	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1
2.5°	312.3	308.4	308.4	309.5	312.8	310.0	307.7	305.6	307.7	302.6	304.4
5°	397.9	397.4	397.4	393.0	396.9	397.4	393.0	389.0	390.0	382.8	382.8
7.5°	510.6	507.3	506.2	499.9	504.5	503.9	496.6	489.9	489.9	478.0	475.2
10°	637.0	632.4	630.3	622.4	626.3	624.0	613.3	603.1	600.3	583.4	577.3
12.5°	776.2	773.4	770.0	759.9	763.2	758.8	743.5	728.8	722.6	700.1	689.4
15°	923.9	928.4	922.7	911.0	913.2	905.3	885.5	865.3	855.7	825.3	809.5
17.5°	1076.1	1081.7	1075.6	1062.1	1061.4	1050.7	1023.7	998.9	984.7	945.9	925.0
20°	1221.0	1222.7	1214.8	1200.1	1196.7	1182.0	1149.3	1114.4	1100.9	1053.0	1026.5
22.5°	1334.8	1341.0	1331.5	1320.8	1310.1	1291.5	1253.1	1214.8	1195.5	1140.9	1108.8
25°	1417.7	1431.8	1420.5	1408.1	1396.3	1374.2	1331.5	1290.3	1266.6	1205.7	1169.0
27.5°	1472.3	1485.8	1473.5	1459.3	1447.0	1421.6	1374.9	1335.4	1306.6	1240.1	1200.6
30°	1474.1	1490.4	1477.4	1462.3	1450.4	1425.1	1377.1	1336.5	1304.3	1237.8	1196.7
32.5°	1433.5	1446.5	1433.5	1420.5	1407.0	1382.8	1334.8	1295.9	1262.2	1198.5	1157.2
35°	1353.5	1364.7	1351.7	1336.5	1327.0	1305.5	1259.9	1222.7	1188.8	1130.2	1094.2
37.5°	1242.9	1253.1	1241.3	1232.7	1218.7	1199.5	1157.8	1124.6	1092.5	1039.5	1007.3
40°	1096.4	1117.8	1106.5	1100.9	1087.9	1071.6	1034.9	1005.6	976.3	930.1	903.6
42.5°	949.8	970.1	960.0	956.1	944.7	930.6	900.2	875.4	848.3	810.0	787.4
45°	789.2	810.6	801.1	799.3	789.7	779.0	746.3	733.4	709.7	673.6	662.9
47.5°	638.1	642.1	633.1	633.6	626.8	619.6	593.1	585.2	573.3	545.7	533.2
50°	475.7	478.5	471.3	473.5	469.0	464.5	446.4	442.5	435.1	416.5	409.3
52.5°	327.5	340.5	335.4	337.7	335.4	333.7	326.3	319.6	316.3	304.4	301.0
55°	236.8	237.9	234.0	236.2	234.5	234.0	229.4	225.5	223.8	216.4	215.4
57.5°	164.1	165.2	165.2	164.1	163.4	162.4	159.5	157.3	156.2	154.5	151.1
60°	108.8	113.4	111.6	112.7	112.2	112.2	109.9	108.3	107.6	104.3	104.3
62.5°	74.4	77.2	76.0	76.7	76.0	76.0	74.4	73.2	73.2	72.7	71.1
65°	49.5	51.3	50.2	50.7	50.7	50.7	49.5	48.5	48.5	47.9	46.7
67.5°	31.6	32.7	32.1	32.7	32.1	32.7	31.6	31.0	30.4	30.4	29.9
70°	19.1	19.7	19.1	19.7	19.1	19.1	18.6	18.6	18.1	17.5	17.5
72.5°	10.2	10.7	10.7	10.7	10.7	10.7	10.2	9.6	9.6	9.6	9.0
75°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.5	4.5	4.5
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°	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1
2.5°	299.8	297.0	295.9	293.7	290.9	289.1	287.5	288.0	284.0	281.2	277.3
5°	375.4	369.3	365.8	360.7	354.6	349.5	344.9	342.8	335.4	330.3	319.6
7.5°	464.5	453.7	447.0	438.0	427.2	418.3	409.3	403.0	391.8	382.1	365.8
10°	562.0	545.7	533.8	520.3	503.9	489.2	475.7	464.5	447.6	432.9	411.5
12.5°	668.6	645.4	628.5	608.7	585.7	565.4	541.1	528.2	505.0	484.8	457.1
15°	781.8	751.4	727.7	700.7	670.2	643.1	612.2	593.1	562.6	536.6	502.2
17.5°	890.6	852.3	821.3	786.9	749.1	714.2	677.5	650.5	613.3	581.2	540.1
20°	985.4	939.6	901.9	860.2	815.7	772.8	732.8	696.7	653.3	615.6	568.7
22.5°	1062.6	1009.6	966.1	917.7	866.4	817.9	772.3	731.1	681.5	639.8	588.5
25°	1118.4	1060.3	1011.9	958.2	901.9	846.7	798.1	753.0	699.0	654.5	599.8
27.5°	1147.6	1086.3	1034.9	977.5	917.7	860.2	807.8	759.9	703.0	656.1	599.8
30°	1142.6	1080.0	1027.0	967.8	907.5	850.1	795.3	747.4	688.8	641.5	585.2
32.5°	1103.7	1042.3	990.5	932.9	873.7	817.9	763.2	717.0	658.4	612.2	557.5
35°	1039.5	981.4	932.4	877.6	821.8	769.5	719.8	673.0	616.6	572.7	521.5
37.5°	956.1	903.1	858.5	807.8	756.5	709.1	660.1	620.1	569.9	528.7	478.5
40°	856.2	809.5	770.0	724.9	678.7	637.5	596.4	557.5	508.5	471.8	429.0
42.5°	746.3	706.3	672.5	633.1	593.1	558.0	522.5	488.7	448.1	414.9	374.9
45°	628.0	594.1	566.6	535.0	501.7	469.0	443.0	414.9	377.2	352.3	318.4
47.5°	505.7	479.7	458.8	434.6	408.1	387.9	363.0	340.5	312.8	289.8	262.1
50°	389.5	371.4	356.8	340.0	320.7	302.1	287.5	270.0	249.1	230.5	208.5
52.5°	288.0	276.1	267.2	255.9	242.9	233.4	219.8	206.9	191.1	177.1	160.1
55°	206.3	199.6	193.9	187.1	178.1	169.7	162.9	153.9	142.7	132.0	119.5
57.5°	148.3	140.9	140.4	133.0	129.7	123.4	117.2	110.4	102.5	95.3	86.2
60°	102.5	97.6	95.3	92.5	88.5	84.6	81.8	77.2	71.6	66.5	59.7
62.5°	69.3	66.0	64.8	63.7	60.4	58.6	55.3	52.5	48.5	44.6	40.0
65°	45.6	43.4	42.3	40.6	38.8	37.8	36.0	33.9	30.4	28.1	25.3
67.5°	28.8	27.0	26.0	25.3	23.7	23.1	21.4	20.3	18.1	16.9	15.2
70°	16.3	15.8	14.6	14.6	13.5	12.4	11.8	10.7	10.2	9.0	8.4
72.5°	8.4	8.4	7.9	7.4	6.8	6.8	6.2	5.6	5.1	4.5	4.5
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°	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1
2.5°	274.5	273.3	270.5	270.0	263.8	262.6	259.3	254.2	250.3	249.1	250.3
5°	315.6	310.5	302.1	300.5	290.3	287.0	279.6	271.7	264.9	261.0	259.3
7.5°	357.9	349.5	337.0	330.9	316.3	308.9	298.2	287.0	276.1	268.9	264.4
10°	398.6	385.1	362.5	357.4	339.3	327.5	312.8	297.7	284.0	274.0	266.6
12.5°	436.9	420.5	397.4	383.3	359.6	344.4	325.8	307.2	290.3	276.8	266.6
15°	476.4	454.9	426.2	406.5	379.3	359.1	336.5	315.1	295.4	278.4	266.1
17.5°	509.0	482.5	448.7	425.1	393.5	369.3	343.3	318.4	297.0	277.9	263.8
20°	533.2	502.2	463.9	436.3	401.4	374.2	346.1	319.1	295.4	274.5	259.3
22.5°	549.6	514.1	472.4	442.0	405.3	376.0	345.6	317.4	293.1	271.7	255.4
25°	557.5	519.2	475.7	443.0	404.7	374.2	342.8	314.0	289.1	267.2	251.4
27.5°	556.4	515.7	471.3	436.9	397.9	366.5	334.2	305.6	281.2	259.3	242.9
30°	540.1	499.9	454.9	420.0	381.6	350.0	317.9	289.8	266.1	243.5	228.3
32.5°	514.6	473.5	429.5	390.7	357.9	327.0	296.5	267.7	245.2	223.2	208.5
35°	480.2	440.8	398.6	365.3	329.8	299.8	270.5	243.5	222.1	200.6	187.1
37.5°	440.2	402.5	363.5	329.1	298.2	270.5	242.9	218.7	197.3	178.1	165.2
40°	394.0	359.1	323.5	294.2	263.8	238.4	213.1	189.4	172.0	154.5	143.2
42.5°	343.9	312.8	280.7	255.4	227.7	205.2	181.0	164.1	147.1	131.3	122.3
45°	291.4	264.4	237.3	214.2	191.7	172.0	151.1	135.3	122.3	109.4	101.5
47.5°	239.6	216.4	194.5	175.9	156.2	139.9	125.1	111.1	98.6	87.9	81.8
50°	187.1	172.0	154.5	139.2	123.4	109.9	96.4	86.2	76.7	68.8	64.8
52.5°	146.0	132.0	117.8	105.5	94.1	82.9	73.9	65.3	58.6	53.5	50.7
55°	108.8	97.6	86.9	77.2	68.1	60.9	54.6	49.5	45.1	41.1	40.0
57.5°	77.8	69.3	62.0	54.6	49.0	44.6	40.6	37.2	34.4	31.6	31.0
60°	54.1	47.9	43.4	38.8	35.5	32.1	29.9	27.6	25.3	23.7	23.1
62.5°	36.0	32.7	29.3	27.0	25.3	22.5	21.4	19.7	18.6	16.9	16.3
65°	23.1	20.9	19.1	17.5	16.3	15.2	14.1	13.0	11.8	10.7	10.7
67.5°	14.1	12.4	11.8	10.7	9.6	9.0	8.4	7.4	6.8	6.8	6.2
70°	7.9	6.8	6.2	5.6	5.1	5.1	4.5	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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Peachtree City, GA 30269



TEST NUMBER: P1191448

CATALOG NUMBER: LDA4A10930D010TE LAR25NF 4LLWW1

CANDELA DISTRIBUTION (continued):

	82.5°	85°	87.5°	90°	112.5°	135°	157.5°	180°
0°	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1
2.5°	245.7	240.1	239.0	239.0	215.4	201.3	190.6	187.8
5°	251.4	243.5	239.6	237.3	195.0	170.2	153.9	149.4
7.5°	254.2	242.9	236.8	231.7	175.3	143.2	125.7	120.6
10°	253.1	239.6	231.1	224.3	157.3	122.3	104.3	99.7
12.5°	250.8	235.6	224.9	216.4	142.0	106.0	89.7	85.1
15°	248.6	231.1	218.7	208.5	129.7	94.6	80.0	76.0
17.5°	244.1	226.1	212.0	201.3	121.8	90.2	77.8	75.5
20°	239.0	220.4	205.7	195.0	119.5	94.6	87.4	87.4
22.5°	235.6	216.4	202.4	191.7	123.4	105.5	102.5	104.3
25°	231.1	213.1	199.0	188.9	127.4	113.9	112.2	114.4
27.5°	223.8	205.7	192.2	182.0	125.1	112.7	111.1	112.2
30°	209.1	191.7	179.9	169.2	116.2	104.3	101.5	102.0
32.5°	190.6	173.6	162.4	152.2	103.2	91.8	89.0	89.0
35°	170.2	154.5	143.7	134.8	90.7	80.6	77.8	77.2
37.5°	149.9	135.3	126.2	117.8	79.5	70.4	67.6	67.1
40°	129.7	116.7	108.3	101.5	69.9	62.5	59.7	59.2
42.5°	110.4	99.2	91.8	86.2	60.9	55.3	53.0	52.5
45°	91.3	82.3	76.7	72.1	53.0	47.4	46.7	46.7
47.5°	73.9	66.5	62.5	59.7	45.1	40.6	40.0	40.6
50°	59.2	54.1	51.3	49.0	38.3	34.4	32.7	32.7
52.5°	46.7	43.4	41.7	40.0	31.6	27.6	25.3	24.8
55°	37.2	34.4	33.2	32.1	24.8	20.3	18.1	17.5
57.5°	29.3	27.0	26.0	24.8	18.6	14.1	11.8	11.3
60°	22.0	20.3	19.1	18.6	13.0	8.4	6.8	6.2
62.5°	15.8	14.6	13.5	13.0	7.9	4.5	2.8	2.3
65°	9.6	9.6	8.4	7.9	3.9	1.7	1.1	0.5
67.5°	5.6	5.1	4.5	4.5	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

Peachtree City, GA 30269



— 0°-180° - - 45°-225° - - - 90°-270°

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