

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: P1191839

Luminaire Tested: **LDA4A30940D010TE LAR25NF 4LA1 30° Tilt**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1191839
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: LDA4A30940D010TE 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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

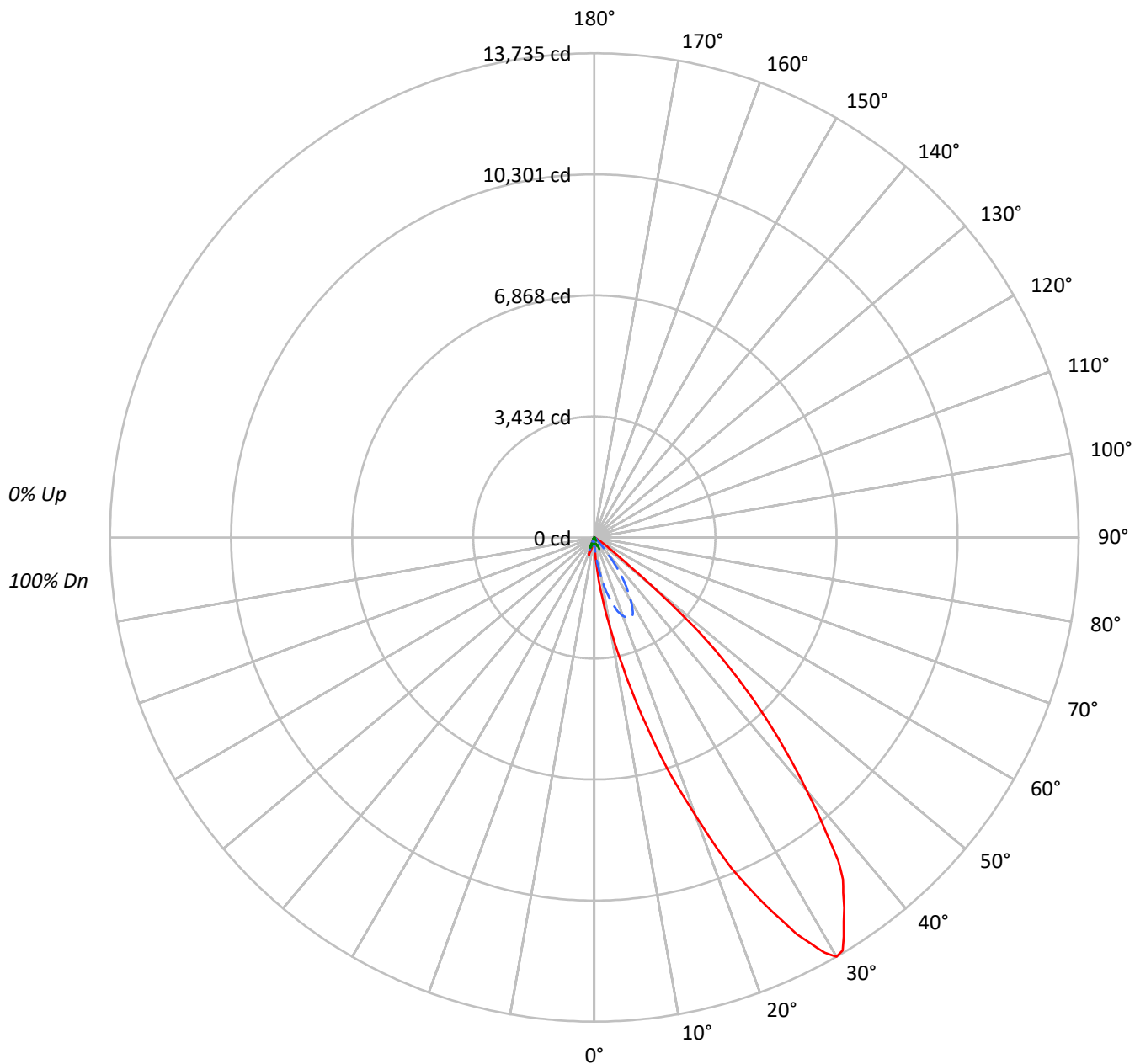
Lumens per Lamp: N/A
Luminaire Lumens: 3181.1 lumens
Efficiency: N/A
Efficacy: 80.7 lumens/watt
Spacing Criteria (0/90/45): 2.56 / 1.01 / 1.3
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 39.4
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

TEST NUMBER: P1191839

CATALOG NUMBER: LDA4A30940D010TE LAR25NF 4LA1 30° Tilt

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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	105	100	95	91		103	98	93	90		95	91	88		91	88	86		89	86	84
3	99	91	85	80		96	89	84	79		87	82	78		84	80	77		82	78	76
4	92	83	76	71		90	82	75	71		79	74	70		77	73	69		75	71	68
5	86	76	69	63		84	75	68	63		73	67	62		71	66	62		69	65	61
6	80	69	62	57		78	68	61	56		67	61	56		65	60	56		64	59	55
7	75	63	56	51		73	63	56	51		61	55	50		60	54	50		59	54	50
8	70	58	51	46		68	58	51	46		56	50	46		55	49	45		54	49	45
9	65	53	46	41		64	53	46	41		52	46	41		51	45	41		50	45	41
10	61	49	42	38		60	49	42	38		48	42	37		47	41	37		46	41	37

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	26014	26014	26014
5°	112983	24528	14858
10°	325784	22094	16157
15°	667573	24377	46660
20°	1101351	45325	47254
25°	1568911	28934	15828
30°	1956181	12676	6224
35°	1853530	5737	2741
40°	1509640	2930	869
45°	1057437	1587	0
50°	396237	1036	0
55°	84449	1161	0
60°	16134	913	0
65°	4787	1576	0
70°	1334	1947	0
75°	0	2573	0
80°	0	3836	0
85°	0	7642	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.2	1.4
10°-20°	381.0	12.0
20°-30°	973.1	30.6
30°-40°	1127.0	35.4
40°-50°	581.5	18.3
50°-60°	60.0	1.9
60°-70°	6.5	0.2
70°-80°	4.1	0.1
80°-90°	3.7	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°	1398.3	44.0
0°-40°	2525.3	79.4
0°-60°	3166.8	99.6
0°-90°	3181.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3181.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	211	211	211	211	211	
5°	912	474	198	131	120	142
15°	5228	1914	191	254	365	1600
25°	11528	2499	213	133	116	5356
35°	12310	1367	38	22	18	7538
45°	6062	160	9	5	0	4540
55°	393	24	5	4	0	492
65°	16	5	5	4	0	21
75°	0	4	5	5	0	0
85°	0	4	5	5	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°	210.9	210.9	210.9	210.9	210.9	210.9	210.9	210.9	210.9	210.9	210.9
2.5°	363.5	350.9	341.8	345.3	365.4	343.6	345.3	338.1	334.5	330.8	321.7
5°	912.5	876.1	852.5	854.3	801.6	841.7	838.0	807.1	787.1	748.9	727.0
7.5°	1712.3	1634.1	1606.8	1597.7	1603.3	1565.0	1548.6	1508.7	1455.9	1386.9	1347.0
10°	2601.1	2553.9	2537.5	2508.5	2506.6	2439.4	2399.4	2348.5	2243.1	2146.7	2075.9
12.5°	3789.9	3644.6	3619.1	3564.5	3550.0	3435.5	3351.9	3277.3	3101.0	2973.7	2861.1
15°	5227.8	5109.6	5136.9	4969.6	4924.1	4737.0	4580.7	4420.7	4135.2	3940.8	3740.8
17.5°	6860.0	6709.1	6727.3	6518.3	6142.0	6176.5	5949.4	5729.4	5327.7	5067.8	4758.7
20°	8390.5	8283.3	8290.5	8012.5	7885.2	7539.9	7236.2	6974.5	6440.1	6109.3	5700.4
22.5°	10151.9	9873.7	9821.1	9442.9	9219.4	8755.9	8332.3	7985.2	7338.0	6965.4	6463.8
25°	11527.9	11337.0	11191.5	10744.4	10433.6	9830.2	9339.4	8825.0	8047.0	7634.3	7038.1
26°	12044.1	11864.1	11676.9	11195.2	10846.2	10208.2	9673.9	9121.2	8288.8	7847.1	7198.1
27°	12627.5	12333.1	12107.7	11567.8	11189.8	10519.1	9884.7	9363.0	8472.3	7983.3	7299.9
28°	13040.3	12745.7	12447.6	11860.5	11451.5	10749.9	10090.0	9521.1	8579.5	8048.7	7341.7
29°	13463.8	13151.1	12716.7	12076.9	11631.4	10893.4	10208.2	9599.2	8610.5	8045.2	7319.8
30°	13734.6	13420.1	12858.4	12198.6	11727.8	10951.6	10240.9	9584.7	8561.4	7972.5	7239.9
31°	13671.0	13381.9	12823.9	12211.4	11718.7	10917.2	10180.9	9481.2	8437.8	7843.4	7094.6
32°	13352.9	13107.4	12684.0	12125.9	11618.8	10799.0	10041.0	9317.5	8259.6	7692.5	6918.2
33°	12983.8	12780.3	12487.6	11953.3	11444.3	10620.8	9848.3	9115.8	8054.3	7487.1	6705.5
34°	12674.9	12491.3	12220.4	11720.6	11206.2	10382.7	9604.8	8861.2	7819.8	7245.3	6454.7
35°	12309.5	12142.3	11891.4	11406.1	10875.4	10062.9	9299.4	8566.8	7543.4	6958.2	6163.9
36°	11991.4	11727.8	11473.4	11000.8	10471.8	9675.6	8939.5	8221.5	7230.8	6629.2	5836.6
37°	11498.7	11235.2	10962.6	10515.4	9993.7	9232.1	8539.5	7852.5	6874.5	6381.9	5487.6
38°	10762.6	10640.8	10368.2	9942.8	9457.6	8743.2	8101.5	7432.6	6472.8	5903.9	5116.8
39°	10075.5	9975.5	9710.2	9321.2	8872.2	8217.8	7616.2	6960.0	6020.2	5482.2	4726.0
40°	9375.7	9275.8	9026.8	8675.9	8272.3	7670.7	7100.0	6456.4	5545.8	5047.7	4333.3
42.5°	7717.9	7614.4	7561.6	7203.5	6776.4	6260.2	5731.2	5149.5	4375.2	3966.3	3406.3
45°	6062.0	5967.5	5769.3	5622.1	5240.4	4811.5	4380.7	3906.2	3335.5	2931.9	2408.5
47.5°	4333.3	4288.0	4295.2	4022.6	3659.1	3321.0	2964.7	2535.7	2030.4	1523.2	1117.9
50°	2064.9	2077.6	2128.5	1937.6	1665.0	1466.9	1256.1	985.2	719.8	565.3	438.0
51°	1337.9	1352.4	1396.0	1259.7	1061.5	927.0	792.5	639.9	510.7	434.5	347.2
52°	905.2	905.2	914.3	834.3	736.1	659.8	581.7	492.7	398.1	341.8	274.5
53°	679.8	678.0	681.7	628.9	561.6	505.3	450.8	385.4	314.5	267.2	212.6
54°	519.8	518.1	521.7	481.7	434.5	392.7	350.9	301.8	243.6	200.0	160.0
55°	392.7	392.7	398.1	367.2	330.8	298.1	267.2	225.4	179.9	145.4	116.3
57.5°	158.1	158.1	163.6	152.7	136.4	123.6	112.6	96.3	79.9	67.3	54.5
60°	65.4	67.3	69.1	63.6	60.0	56.3	52.8	47.2	41.8	34.6	29.0
61°	49.1	49.1	50.9	47.2	45.5	41.8	40.0	36.4	32.7	27.3	23.6
62°	36.4	36.4	38.1	36.4	34.6	32.7	30.9	29.0	25.5	21.8	18.2
63°	27.3	27.3	29.0	27.3	27.3	25.5	23.6	21.8	20.0	16.4	14.5
64°	21.8	21.8	21.8	20.0	20.0	20.0	18.2	18.2	14.5	12.7	10.9
65°	16.4	16.4	16.4	16.4	14.5	14.5	14.5	12.7	12.7	9.1	9.1
66°	12.7	12.7	12.7	10.9	10.9	10.9	10.9	10.9	9.1	7.3	5.4



TEST NUMBER: P1191839

CATALOG NUMBER: LDA4A30940D010TE 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	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
75°	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8
77.5°	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8
80°	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8
82.5°	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8
85°	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8
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):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	210.9	210.9	210.9	210.9	210.9	210.9	210.9	210.9	210.9	210.9	210.9
2.5°	325.4	323.6	305.4	305.4	312.6	301.8	296.2	283.6	243.6	207.2	174.5
5°	719.8	699.9	638.0	619.8	618.0	567.2	538.0	474.4	278.0	198.1	150.9
7.5°	1328.8	1268.8	1163.4	1107.0	1037.9	998.0	927.0	817.9	316.3	185.5	136.4
10°	1964.9	1897.7	1741.4	1641.4	1588.6	1459.6	1341.4	1192.4	354.4	176.4	134.5
12.5°	2693.8	2542.9	2393.9	2215.8	2057.7	1943.2	1746.8	1572.3	379.9	174.5	147.2
15°	3482.7	3293.7	3039.3	2799.2	2575.6	2412.1	2148.5	1914.0	389.0	190.9	192.7
17.5°	4366.2	4011.6	3644.6	3317.3	3010.1	2790.2	2463.0	2186.7	383.6	234.5	307.2
20°	5193.2	4722.5	4224.4	3769.9	3335.5	3050.1	2672.1	2372.1	385.4	345.3	414.4
22.5°	5849.4	5276.8	4669.7	4115.3	3564.5	3222.7	2810.2	2470.2	432.6	369.1	281.7
25°	6332.8	5658.6	4962.4	4324.4	3744.4	3361.0	2908.3	2499.4	403.5	212.6	160.0
26°	6462.0	5751.3	5016.9	4355.2	3766.3	3361.0	2893.8	2468.4	349.0	169.1	132.7
27°	6534.6	5793.0	5026.0	4340.7	3739.0	3322.7	2841.0	2406.7	285.4	141.8	112.6
28°	6543.7	5774.9	4980.4	4280.7	3662.6	3240.9	2746.6	2312.1	236.4	120.0	92.7
29°	6494.7	5707.6	4893.3	4180.7	3546.3	3121.0	2617.4	2195.8	201.8	103.7	78.2
30°	6391.0	5589.4	4760.6	4046.2	3395.5	2975.6	2466.7	2066.8	176.4	89.0	65.4
31°	6242.0	5427.7	4616.9	3886.2	3237.4	2830.2	2324.9	1935.9	156.3	74.5	54.5
32°	6049.4	5236.9	4431.6	3713.5	3095.6	2692.0	2188.5	1803.2	139.9	63.6	45.5
33°	5834.8	5020.5	4229.8	3533.6	2959.2	2550.2	2044.9	1663.1	125.4	52.8	38.1
34°	5587.6	4782.3	4015.3	3353.7	2813.8	2393.9	1890.4	1519.6	109.1	43.7	32.7
35°	5305.8	4516.9	3784.5	3190.0	2652.0	2224.9	1728.7	1366.9	96.3	38.1	27.3
36°	5000.5	4240.7	3551.8	3002.9	2477.5	2048.6	1557.8	1212.4	83.6	32.7	23.6
37°	4680.6	3953.5	3319.2	2790.2	2284.8	1861.4	1381.4	1045.2	72.7	27.3	20.0
38°	4342.4	3664.5	3093.7	2588.4	2081.3	1659.6	1201.5	861.6	63.6	23.6	18.2
39°	3997.1	3379.2	2870.2	2366.7	1872.2	1461.5	1028.8	668.9	56.3	20.0	16.4
40°	3659.1	3110.1	2633.8	2124.9	1663.1	1266.9	861.6	492.7	49.1	18.2	12.7
42.5°	2897.5	2388.5	1890.4	1417.8	1159.7	803.4	478.0	258.1	34.6	12.7	9.1
45°	1895.8	1412.4	1019.7	690.8	599.9	339.9	221.7	160.0	25.5	9.1	7.3
47.5°	785.2	572.6	398.1	287.1	232.7	181.8	141.8	103.7	18.2	7.3	7.3
50°	345.3	272.6	216.3	169.1	147.2	118.2	90.9	63.6	10.9	5.4	5.4
51°	276.3	219.9	169.1	134.5	120.0	96.3	74.5	50.9	10.9	5.4	5.4
52°	218.2	170.8	132.7	103.7	96.3	78.2	61.9	41.8	9.1	5.4	5.4
53°	167.3	129.0	100.0	81.8	76.4	63.6	50.9	34.6	7.3	5.4	5.4
54°	123.6	98.1	78.2	63.6	61.9	50.9	41.8	29.0	7.3	5.4	5.4
55°	90.9	76.4	60.0	50.9	49.1	41.8	34.6	23.6	7.3	5.4	5.4
57.5°	47.2	40.0	32.7	29.0	29.0	27.3	23.6	14.5	5.4	3.7	5.4
60°	25.5	21.8	18.2	16.4	20.0	18.2	16.4	9.1	5.4	3.7	5.4
61°	20.0	18.2	14.5	12.7	16.4	14.5	14.5	7.3	5.4	5.4	5.4
62°	16.4	14.5	12.7	10.9	14.5	12.7	12.7	7.3	5.4	5.4	5.4
63°	12.7	10.9	9.1	9.1	12.7	12.7	10.9	5.4	5.4	5.4	5.4
64°	9.1	9.1	7.3	7.3	10.9	10.9	9.1	5.4	5.4	5.4	5.4
65°	7.3	7.3	5.4	5.4	9.1	9.1	9.1	5.4	5.4	5.4	5.4
66°	5.4	5.4	5.4	3.7	7.3	9.1	9.1	3.7	5.4	5.4	5.4



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CATALOG NUMBER: LDA4A30940D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
72.5°	1.8	1.8	1.8	1.8	5.4	7.3	7.3	3.7	5.4	5.4	5.4
75°	1.8	1.8	1.8	1.8	5.4	7.3	7.3	3.7	5.4	5.4	5.4
77.5°	1.8	1.8	1.8	1.8	5.4	7.3	7.3	3.7	5.4	5.4	7.3
80°	1.8	1.8	1.8	1.8	5.4	7.3	7.3	3.7	5.4	5.4	7.3
82.5°	1.8	1.8	1.8	1.8	5.4	7.3	7.3	3.7	5.4	5.4	7.3
85°	1.8	1.8	1.8	1.8	5.4	7.3	7.3	3.7	5.4	5.4	7.3
87.5°	1.8	1.8	1.8	1.8	5.4	7.3	7.3	3.7	5.4	5.4	7.3
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):

	135°	157.5°	180°
0°	210.9	210.9	210.9
2.5°	158.1	149.0	147.2
5°	130.8	121.7	120.0
7.5°	120.0	112.6	110.9
10°	123.6	125.4	129.0
12.5°	158.1	174.5	189.0
15°	254.4	319.9	365.4
17.5°	443.6	490.8	521.7
20°	389.0	358.1	360.0
22.5°	218.2	196.3	194.6
25°	132.7	120.0	116.3
26°	110.9	100.0	96.3
27°	90.9	81.8	78.2
28°	74.5	67.3	65.4
29°	63.6	54.5	52.8
30°	52.8	45.5	43.7
31°	43.7	38.1	36.4
32°	38.1	32.7	29.0
33°	30.9	27.3	25.5
34°	27.3	21.8	20.0
35°	21.8	18.2	18.2
36°	20.0	16.4	14.5
37°	16.4	12.7	12.7
38°	14.5	10.9	9.1
39°	12.7	9.1	7.3
40°	10.9	7.3	5.4
42.5°	7.3	3.7	1.8
45°	5.4	1.8	0.0
47.5°	3.7	1.8	0.0
50°	3.7	0.0	0.0
51°	3.7	0.0	0.0
52°	3.7	0.0	0.0
53°	3.7	0.0	0.0
54°	3.7	0.0	0.0
55°	3.7	0.0	0.0
57.5°	3.7	0.0	0.0
60°	3.7	0.0	0.0
61°	3.7	0.0	0.0
62°	3.7	0.0	0.0
63°	3.7	1.8	0.0
64°	3.7	1.8	0.0
65°	3.7	1.8	0.0
66°	3.7	1.8	0.0



TEST NUMBER: P1191839

CATALOG NUMBER: LDA4A30940D010TE LAR25NF 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
72.5°	5.4	1.8	0.0
75°	5.4	1.8	0.0
77.5°	5.4	1.8	0.0
80°	5.4	1.8	0.0
82.5°	5.4	1.8	0.0
85°	5.4	1.8	0.0
87.5°	3.7	1.8	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°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	5.4	3.7
70°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	1.8	1.8

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67.5°	3.7	3.7	3.7	3.7	7.3	7.3	7.3	3.7	5.4	5.4	5.4
70°	1.8	1.8	1.8	3.7	5.4	7.3	7.3	3.7	5.4	5.4	5.4

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67.5°	3.7	1.8	0.0
70°	3.7	1.8	0.0

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(END OF REPORT)