

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: P170319

Luminaire Tested: **LDA6A30835D010TE LAR20SP 6LA1 30° Tilt**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P170319
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25660)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A30835D010TE LAR20SP 6LA1 30° Tilt
Description: PORTFOLIO 6" Adjustable Reflector, Self-flange Trim Ring, 20° Spot
Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2553.8 lumens
Efficiency: N/A
Efficacy: 57.4 lumens/watt
Spacing Criteria (0/90/45): 2.45 / 0.41 / 1.34
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

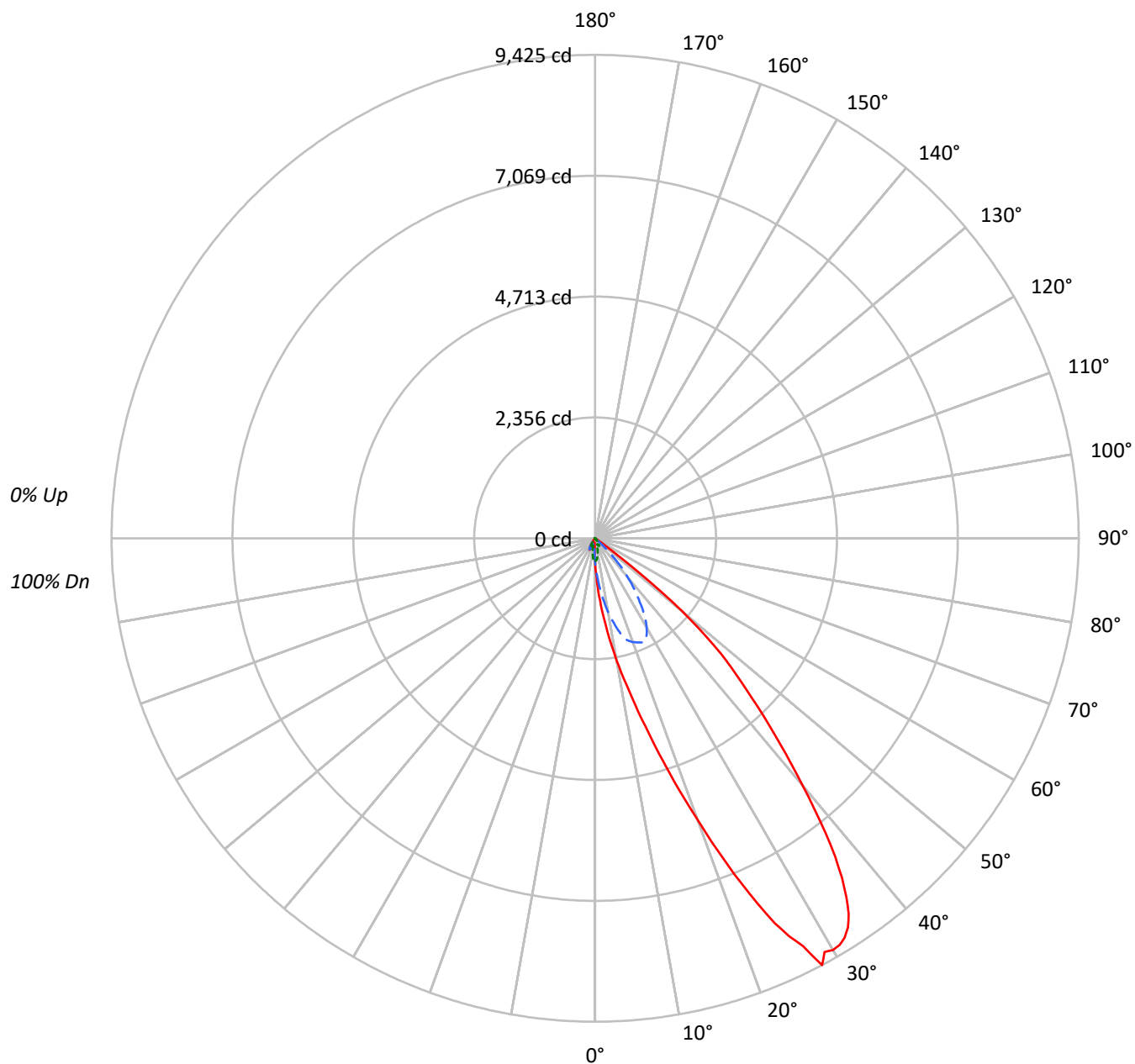
Input Watts (W): 44.49
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	106	104	110	107	104	102	103	101	99		99	97	96		96
2	105	100	95	91	103	98	93	90	95	91	88		91	88	86		89
3	99	91	85	80	96	89	84	79	87	82	78		84	80	77		82
4	92	83	76	71	90	82	75	71	79	74	70		77	73	69		75
5	86	76	69	63	84	75	68	63	73	67	62		71	66	62		69
6	80	69	62	57	78	68	61	57	67	61	56		65	60	56		64
7	75	63	56	51	73	63	56	51	61	55	51		60	54	50		59
8	70	58	51	46	68	58	51	46	56	50	46		55	50	45		54
9	65	54	46	42	64	53	46	42	52	46	41		51	45	41		50
10	61	49	42	38	60	49	42	38	48	42	38		47	41	37		46

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	24971	24971	24971
5°	72364	22397	4997
10°	134544	16032	4620
15°	215626	8797	6129
20°	340638	7123	9772
25°	500805	9182	15055
30°	586831	9609	12882
35°	571275	5133	7228
40°	450007	2125	3249
45°	322095	853	1217
50°	189043	401	401
55°	11823	296	0
60°	2577	340	0
65°	610	402	0
70°	256	497	0
75°	0	996	0
80°	0	1484	0
85°	0	2956	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.2	2.3
10°-20°	305.3	12.0
20°-30°	750.0	29.4
30°-40°	869.6	34.0
40°-50°	505.4	19.8
50°-60°	55.5	2.2
60°-70°	3.2	0.1
70°-80°	2.9	0.1
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°	1114.5	43.6
0°-40°	1984.1	77.7
0°-60°	2545.0	99.7
0°-90°	2553.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2553.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	456	456	456	456	456	
5°	1315	942	407	116	91	159
15°	3799	1935	155	105	108	1163
25°	8280	2240	152	233	249	3770
35°	8536	1518	77	108	108	5155
45°	4155	365	11	16	16	3231
55°	124	11	3	3	0	438
65°	5	3	3	3	0	7
75°	0	3	5	3	0	0
85°	0	3	5	3	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°	22.5°	45°	67.5°
0°	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5	455.5
2.5°	851.6	810.9	823.4	814.0	806.2	795.2	804.6	781.1	779.6	688.8	580.8
5°	1315.0	1257.0	1264.9	1250.8	1233.6	1214.8	1206.9	1180.3	1163.1	942.4	685.7
7.5°	1834.7	1770.5	1765.8	1772.1	1747.0	1714.1	1701.6	1657.8	1614.0	1197.6	762.4
10°	2417.0	2354.4	2366.9	2366.9	2316.8	2268.3	2260.5	2180.6	2075.8	1473.1	810.9
12.5°	3027.5	2958.7	2971.2	2946.1	2896.0	2814.6	2809.9	2687.8	2567.3	1700.1	835.9
15°	3799.3	3680.3	3691.3	3630.2	3572.3	3475.2	3429.8	3278.0	3074.5	1934.9	835.9
17.5°	4755.8	4580.4	4627.4	4508.4	4392.6	4281.4	4123.3	3932.4	3620.8	2085.1	801.5
20°	5839.0	5635.5	5787.4	5522.8	5333.4	5153.4	4951.4	4655.6	4178.1	2154.0	742.0
22.5°	7082.0	6881.6	6855.0	6628.0	6368.2	6050.4	5771.7	5339.7	4682.2	2197.9	659.0
25°	8279.5	8054.1	7986.8	7723.8	7382.6	6922.3	6531.0	5962.7	5079.8	2240.1	562.0
26°	8634.9	8422.0	8339.0	8083.9	7722.2	7232.3	6812.7	6174.0	5189.4	2216.6	511.9
27°	8926.1	8719.4	8627.1	8262.3	7994.6	7277.7	7003.7	6346.2	5266.1	2180.6	474.3
28°	9425.4	9165.6	8850.9	8572.3	8191.9	7676.9	7155.6	6452.7	5338.1	2136.8	425.8
29°	9220.4	9012.2	8980.9	8710.0	8309.3	7770.8	7238.5	6505.9	5327.1	2078.9	374.1
30°	9270.5	9052.9	9026.2	8752.3	8345.3	7791.1	7246.4	6501.2	5309.9	2010.0	317.8
31°	9250.1	9029.4	9005.9	8714.7	8314.0	7741.0	7191.6	6429.2	5231.7	1925.5	259.9
32°	9179.7	8955.8	8929.2	8617.7	8201.3	7827.1	7055.4	6302.4	5118.9	1833.1	205.1
33°	9046.6	8825.9	8786.7	8451.7	8032.2	7456.1	6867.5	6133.3	4985.9	1731.4	156.5
34°	8836.8	8623.9	8556.6	8221.6	7799.0	7222.9	6632.7	5931.4	4812.1	1634.3	120.5
35°	8536.3	8340.6	8265.5	7891.3	7504.7	6927.0	6340.0	5698.2	4516.3	1518.5	95.5
36°	8184.0	8013.4	7919.5	7579.8	7157.1	6593.6	6041.0	5450.8	4433.3	1410.4	81.4
37°	7773.9	7626.8	7550.1	7180.6	6795.5	6247.6	5754.5	5187.8	4218.8	1300.9	67.3
38°	7305.8	7177.5	7100.8	6736.0	6363.5	5865.7	5417.9	4912.3	3999.7	1200.7	54.8
39°	6790.8	6682.8	6549.7	6280.5	5976.8	5504.0	5137.7	4625.8	3777.4	1092.7	45.4
40°	6288.3	6188.1	6078.6	5839.0	5551.0	5148.7	4790.2	4339.4	3544.1	984.7	37.6
42.5°	5156.5	5072.0	4974.9	4823.1	4580.4	4301.8	3977.7	3650.6	3063.5	726.4	25.0
45°	4154.6	4126.5	4115.5	3894.8	3735.1	3531.6	3293.7	3046.3	2561.0	364.7	17.2
47.5°	3335.9	3298.4	3281.1	3170.0	3057.3	2869.4	2672.2	2479.6	1983.4	62.6	11.0
50°	2216.6	2224.5	2194.7	2085.1	1939.6	1822.2	1610.8	1416.7	973.7	29.7	7.8
51°	1634.3	1648.4	1689.1	1523.2	1432.4	1310.3	1127.1	965.9	646.5	23.5	6.3
52°	1081.7	1100.5	1072.3	997.2	928.3	810.9	743.6	591.7	325.6	20.4	6.3
53°	610.5	659.0	635.6	552.6	504.1	419.5	355.4	267.7	128.4	15.7	4.7
54°	267.7	267.7	286.5	231.7	203.5	159.7	137.8	104.9	67.3	12.5	4.7
55°	123.7	125.2	126.8	114.3	106.4	93.9	83.0	68.9	50.1	11.0	4.7
57.5°	50.1	50.1	50.1	47.0	43.8	40.7	37.6	32.9	25.0	6.3	3.1
60°	23.5	23.5	23.5	21.9	20.4	20.4	17.2	15.7	12.5	3.1	3.1
61°	17.2	17.2	17.2	17.2	15.7	14.1	12.5	12.5	9.4	3.1	3.1
62°	12.5	12.5	12.5	12.5	11.0	11.0	9.4	9.4	6.3	3.1	3.1
63°	9.4	9.4	9.4	9.4	7.8	7.8	6.3	6.3	4.7	3.1	3.1
64°	6.3	6.3	7.8	6.3	6.3	6.3	4.7	4.7	4.7	3.1	3.1
65°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	3.1	3.1	3.1	3.1
66°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	1.6	3.1	3.1



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CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	3.1
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	3.1
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	3.1
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	4.7
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	4.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	4.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	4.7
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):

	90°	112.5°	135°	157.5°	180°
0°	455.5	455.5	455.5	455.5	455.5
2.5°	436.8	331.9	255.2	198.8	170.6
5°	407.0	209.8	115.8	95.5	90.8
7.5°	352.2	120.5	92.4	83.0	79.8
10°	288.0	98.6	86.1	86.1	83.0
12.5°	216.0	93.9	92.4	93.9	92.4
15°	155.0	97.1	104.9	109.6	108.0
17.5°	120.5	109.6	123.7	133.1	133.1
20°	122.1	129.9	150.3	167.5	167.5
22.5°	134.6	156.5	189.4	203.5	211.3
25°	151.8	192.5	233.2	250.5	248.9
26°	162.8	201.9	242.6	250.5	248.9
27°	167.5	206.6	242.6	245.8	244.2
28°	169.1	205.1	236.4	236.4	233.2
29°	164.4	194.1	223.9	222.3	220.7
30°	151.8	180.0	206.6	205.1	203.5
31°	137.8	161.2	187.9	186.3	186.3
32°	122.1	144.0	167.5	167.5	165.9
33°	106.4	126.8	147.2	145.6	145.6
34°	92.4	108.0	126.8	125.2	126.8
35°	76.7	92.4	108.0	106.4	108.0
36°	64.2	76.7	90.8	90.8	92.4
37°	53.2	64.2	76.7	76.7	78.3
38°	43.8	53.2	64.2	64.2	65.7
39°	36.0	43.8	53.2	54.8	54.8
40°	29.7	36.0	43.8	45.4	45.4
42.5°	17.2	21.9	26.6	26.6	28.2
45°	11.0	14.1	15.7	17.2	15.7
47.5°	7.8	7.8	9.4	9.4	9.4
50°	4.7	6.3	6.3	4.7	4.7
51°	4.7	4.7	4.7	4.7	3.1
52°	4.7	4.7	3.1	3.1	3.1
53°	3.1	4.7	3.1	1.6	1.6
54°	3.1	4.7	3.1	1.6	1.6
55°	3.1	3.1	3.1	1.6	0.0
57.5°	3.1	3.1	3.1	1.6	0.0
60°	3.1	3.1	3.1	0.0	0.0
61°	3.1	3.1	3.1	1.6	0.0
62°	3.1	3.1	3.1	0.0	0.0
63°	3.1	3.1	3.1	1.6	0.0
64°	3.1	3.1	3.1	1.6	0.0
65°	3.1	3.1	3.1	1.6	0.0
66°	3.1	3.1	3.1	1.6	0.0



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CATALOG NUMBER: LDA6A30835D010TE LAR20SP 6LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	3.1	4.7	3.1	1.6	0.0
75°	4.7	6.3	3.1	1.6	0.0
77.5°	4.7	6.3	3.1	1.6	0.0
80°	4.7	6.3	3.1	1.6	0.0
82.5°	4.7	4.7	3.1	1.6	0.0
85°	4.7	4.7	3.1	1.6	0.0
87.5°	4.7	4.7	3.1	1.6	0.0
90°	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°







67.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.1	3.1
70°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.1	3.1





67.5°	3.1	4.7	3.1	1.6	0.0
70°	3.1	4.7	3.1	1.6	0.0



(END OF REPORT)