

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: P208750

Luminaire Tested: **LDSQA6A10835D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208750
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29055)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQA6A10835D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1111.7 lumens
Efficiency: N/A
Efficacy: 81.0 lumens/watt
Spacing Criteria (0/90/45): 0.37 / 0.38 / 0.39
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

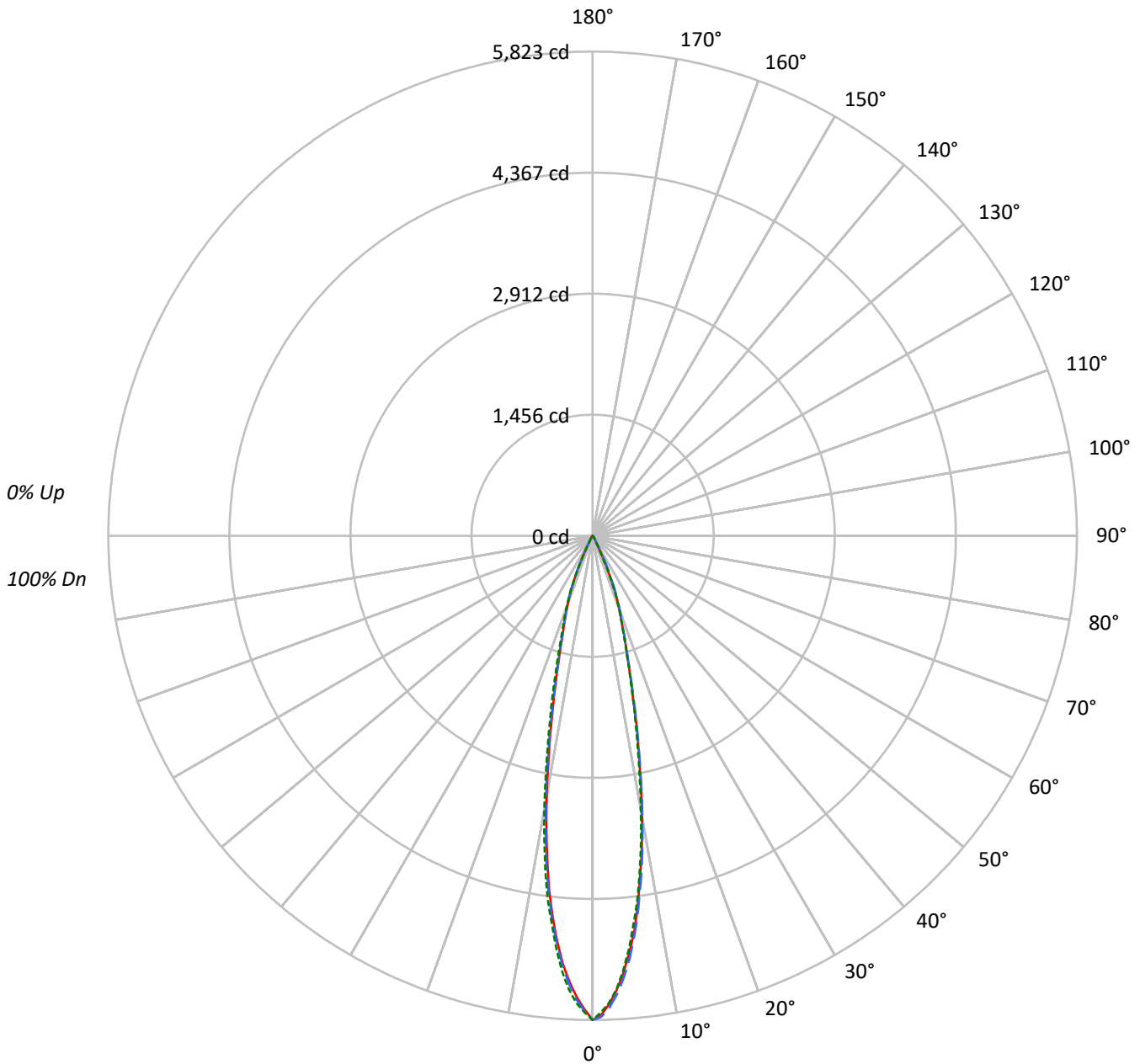
Input Watts (W): 13.73
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	115	113	111	110	113	111	109	108	107	106	105	103	102	102	100	99	99	97	97	97	97
2	112	108	105	103	110	107	104	102	103	101	100	101	99	97	98	97	95	94	94	94	94
3	108	104	100	98	107	103	99	97	100	98	95	98	96	94	96	94	93	91	91	91	91
4	105	100	96	93	104	99	96	93	97	94	92	95	93	91	94	92	90	89	89	89	89
5	102	97	93	90	101	96	92	89	94	91	89	93	90	88	91	89	87	86	86	86	86
6	99	94	90	87	98	93	89	86	92	88	86	90	88	85	89	87	85	84	84	84	84
7	97	91	87	84	96	90	86	84	89	86	83	88	85	83	87	85	83	82	82	82	82
8	94	88	84	82	93	88	84	81	87	83	81	86	83	81	85	82	80	80	80	80	80
9	92	86	82	79	91	85	82	79	85	81	79	84	81	79	83	80	78	78	78	78	78
10	90	84	80	77	89	83	80	77	83	79	77	82	79	77	81	79	77	76	76	76	76

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	250709	250709	250709
5°	217881	215651	211761
10°	149684	146042	138723
15°	77947	77261	71159
20°	43345	42415	40128
25°	14338	13283	15582
30°	3177	2938	2625
35°	1188	1167	1041
40°	467	444	422
45°	146	146	146
50°	27	27	54
55°	30	0	30
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	425.3	38.3
10°-20°	493.0	44.3
20°-30°	171.3	15.4
30°-40°	18.2	1.6
40°-50°	3.5	0.3
50°-60°	0.4	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	0.0	0.0
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°	1089.6	98.0
0°-40°	1107.8	99.7
0°-60°	1111.7	100.0
0°-90°	1111.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1111.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5823	5823	5823	5823	5823	
5°	5041	5102	4990	4928	4900	428
15°	1749	1787	1733	1632	1596	503
25°	302	392	280	343	328	163
35°	23	32	22	29	20	17
45°	2	6	2	6	2	2
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	5822.9	5822.9	5822.9	5822.9	5822.9	5822.9	5822.9	5822.9	5822.9
1°	5769.4	5768.6	5789.2	5794.8	5732.1	5817.8	5715.8	5820.1	5694.4
2°	5639.7	5646.8	5682.1	5677.4	5622.6	5698.0	5578.2	5660.3	5547.3
3°	5475.1	5487.8	5528.6	5525.4	5461.6	5526.2	5399.3	5472.7	5366.4
4°	5273.6	5303.3	5337.4	5346.6	5249.4	5307.7	5184.3	5253.0	5151.8
5°	5041.2	5080.4	5102.2	5089.9	4989.6	5043.1	4928.1	5025.7	4899.6
6°	4778.6	4809.1	4825.4	4803.6	4692.5	4753.2	4645.7	4728.6	4605.3
7°	4466.0	4500.6	4513.6	4492.2	4415.3	4439.9	4332.4	4401.8	4286.4
8°	4119.0	4171.0	4172.9	4153.5	4073.8	4046.8	3985.3	4036.1	3926.6
9°	3778.3	3817.2	3816.4	3802.1	3714.0	3674.8	3614.9	3651.0	3553.8
10°	3423.7	3458.6	3446.7	3433.6	3340.4	3296.8	3239.3	3258.3	3173.0
11°	3048.1	3092.5	3073.5	3060.8	2968.0	2925.1	2867.6	2872.8	2797.8
12°	2668.5	2731.6	2709.0	2700.6	2615.0	2573.3	2521.4	2515.8	2444.8
13°	2350.0	2388.9	2366.7	2362.3	2287.0	2250.9	2167.2	2189.4	2124.7
14°	2010.1	2077.9	2058.1	2056.1	1994.3	1960.5	1883.2	1900.6	1844.3
15°	1748.7	1802.7	1786.8	1786.0	1733.3	1701.1	1632.5	1646.8	1596.4
16°	1510.8	1561.5	1550.0	1552.0	1505.2	1477.0	1417.6	1429.5	1389.0
17°	1345.0	1363.2	1352.5	1352.5	1313.6	1296.2	1245.0	1256.5	1224.8
18°	1180.0	1186.7	1193.5	1194.6	1160.5	1148.6	1105.8	1116.1	1089.9
19°	1044.7	1061.0	1064.9	1065.7	1035.6	1028.9	992.0	999.9	978.5
20°	946.0	955.5	956.7	954.7	925.7	920.2	887.3	894.4	875.8
21°	831.7	848.4	844.8	841.6	811.5	807.1	779.4	780.6	762.3
22°	704.4	734.2	730.2	724.6	683.8	677.8	670.7	667.9	650.5
23°	548.5	617.9	614.4	606.4	547.0	564.8	560.4	555.3	539.0
24°	420.8	502.5	500.5	488.3	409.3	453.7	449.0	444.6	431.9
25°	301.8	391.9	392.3	373.2	279.6	359.3	342.7	339.5	328.0
26°	215.8	291.5	293.5	266.1	171.7	259.4	247.5	243.1	234.0
27°	131.3	203.1	207.0	174.5	107.1	174.1	166.6	161.8	135.6
28°	90.4	132.5	137.2	107.9	83.7	116.2	107.1	101.5	78.9
29°	77.3	86.5	90.0	76.2	70.6	77.3	73.0	70.6	63.9
30°	63.9	65.8	67.4	63.1	59.1	61.1	59.1	57.1	52.8
32.5°	40.5	44.0	45.2	42.0	38.5	39.7	39.7	36.9	33.3
35°	22.6	28.2	31.7	27.8	22.2	26.6	28.6	24.6	19.8
37.5°	13.9	17.5	22.2	17.5	13.5	17.1	20.6	15.5	12.7
40°	8.3	10.7	15.9	10.7	7.9	10.3	14.3	9.5	7.5
42.5°	4.8	6.3	10.3	6.3	4.4	5.9	9.5	5.6	4.4
45°	2.4	3.6	6.3	3.6	2.4	3.6	5.9	3.2	2.4
47.5°	1.2	2.0	3.6	2.0	1.2	2.0	3.2	2.0	1.2
50°	0.4	0.8	2.0	0.8	0.4	0.8	2.0	0.8	0.8
52.5°	0.4	0.4	1.2	0.4	0.4	0.4	0.8	0.4	0.4
55°	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4
57.5°	0.4	0.0	0.4	0.0	0.0	0.0	0.4	0.4	0.4
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°







62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)