

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: P208772

Luminaire Tested: **LDSQA6A30827D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208772
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: LDSQA6A30827D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2723.0 lumens
Efficiency: N/A
Efficacy: 61.0 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

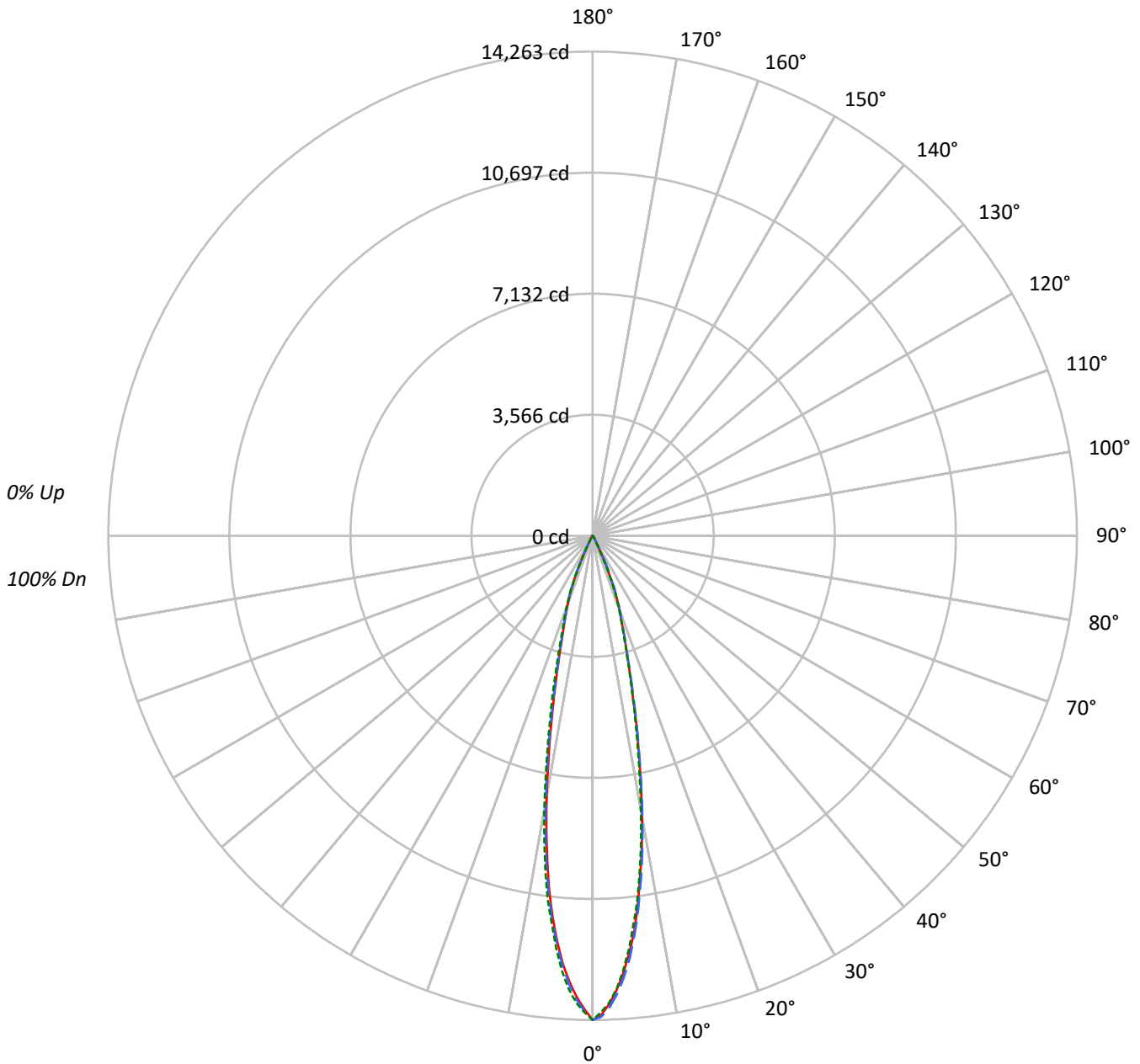
Input Watts (W): 44.62
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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															
1	115	113	111	110	113	111	109	108	107	106	105	103	102	102	100	99	99	97				97															
2	112	108	105	103	110	107	104	102	103	101	100	101	99	97	98	97	95	94				94															
3	108	104	100	98	107	103	99	97	100	98	95	98	96	94	96	94	93	91				91															
4	105	100	96	93	104	99	96	93	97	94	92	95	93	91	94	92	90	89				89															
5	102	97	93	90	101	96	92	89	94	91	89	93	90	88	91	89	87	86				86															
6	99	94	90	87	98	93	89	86	92	88	86	90	88	85	89	87	85	84				84															
7	97	91	87	84	96	90	86	84	89	86	83	88	85	83	87	85	83	82				82															
8	94	88	84	82	93	88	84	81	87	83	81	86	83	81	85	82	80	80				80															
9	92	86	82	79	91	85	82	79	85	81	79	84	81	79	83	80	78	78				78															
10	90	84	80	77	89	83	80	77	83	79	77	82	79	77	81	79	77	76				76															

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	614107	614107	614107
5°	533691	528232	518698
10°	366648	357729	339804
15°	190935	189245	174304
20°	106167	103899	98286
25°	35122	32537	38172
30°	7776	7199	6423
35°	2912	2859	2554
40°	1147	1090	1040
45°	353	353	353
50°	67	67	127
55°	75	0	75
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°	1041.8	38.3
10°-20°	1207.5	44.3
20°-30°	419.6	15.4
30°-40°	44.7	1.6
40°-50°	8.6	0.3
50°-60°	0.9	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°	2668.9	98.0
0°-40°	2713.5	99.7
0°-60°	2723.0	100.0
0°-90°	2723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2723.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	14263	14263	14263	14263	14263	
5°	12348	12498	12222	12071	12001	1050
15°	4284	4377	4246	3999	3910	1232
25°	739	961	685	839	804	400
35°	55	78	54	70	49	42
45°	6	16	6	15	6	6
55°	1	1	0	1	1	1
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°	14263.1	14263.1	14263.1	14263.1	14263.1	14263.1	14263.1	14263.1	14263.1
1°	14131.9	14130.0	14180.5	14194.1	14040.6	14250.4	14000.8	14256.3	13948.3
2°	13814.2	13831.7	13918.2	13906.5	13772.5	13957.0	13663.6	13864.7	13587.9
3°	13411.0	13442.1	13542.2	13534.4	13378.0	13536.4	13225.5	13405.2	13144.8
4°	12917.5	12990.4	13073.9	13096.3	12858.2	13001.1	12698.9	12867.0	12619.2
5°	12348.2	12444.4	12497.8	12467.7	12221.9	12353.0	12071.3	12310.3	12001.3
6°	11705.0	11779.8	11819.7	11766.2	11494.2	11642.9	11379.6	11582.6	11280.5
7°	10939.5	11024.0	11056.0	11003.6	10815.1	10875.3	10612.1	10782.1	10499.4
8°	10089.4	10216.6	10221.5	10173.9	9978.6	9912.6	9762.0	9886.3	9618.2
9°	9254.8	9350.0	9348.1	9313.1	9097.4	9001.3	8854.6	8943.0	8704.9
10°	8386.3	8471.8	8442.6	8410.6	8182.3	8075.4	7934.5	7981.1	7772.3
11°	7466.2	7575.0	7528.4	7497.3	7270.0	7165.1	7024.2	7036.8	6853.2
12°	6536.5	6690.9	6635.6	6615.2	6405.3	6303.3	6176.0	6162.4	5988.5
13°	5756.3	5851.5	5797.1	5786.5	5601.9	5513.4	5308.5	5362.9	5204.5
14°	4923.7	5089.9	5041.3	5036.4	4884.9	4802.3	4612.8	4655.6	4517.6
15°	4283.5	4415.6	4376.8	4374.8	4245.6	4166.9	3998.8	4033.8	3910.4
16°	3700.6	3824.9	3796.8	3801.6	3687.0	3618.0	3472.3	3501.4	3402.3
17°	3294.5	3339.2	3312.9	3312.9	3217.7	3175.0	3049.6	3077.8	3000.1
18°	2890.3	2906.8	2923.3	2926.3	2842.7	2813.6	2708.6	2733.9	2669.8
19°	2559.0	2598.9	2608.6	2610.5	2536.7	2520.2	2429.8	2449.2	2396.8
20°	2317.1	2340.4	2343.3	2338.5	2267.6	2254.0	2173.3	2190.8	2145.1
21°	2037.3	2078.1	2069.4	2061.6	1987.8	1977.1	1909.1	1912.0	1867.3
22°	1725.4	1798.3	1788.6	1775.0	1674.9	1660.3	1642.9	1636.1	1593.3
23°	1343.6	1513.6	1504.9	1485.5	1339.7	1383.5	1372.8	1360.1	1320.3
24°	1030.8	1230.9	1226.1	1196.0	1002.6	1111.4	1099.8	1089.1	1058.0
25°	739.3	959.9	960.8	914.2	684.9	880.2	839.4	831.6	803.5
26°	528.5	714.1	718.9	651.9	420.7	635.4	606.2	595.5	573.2
27°	321.6	497.4	507.1	427.5	262.3	426.5	408.0	396.4	332.3
28°	221.5	324.5	336.2	264.3	205.0	284.7	262.3	248.7	193.3
29°	189.4	211.8	220.5	186.5	172.9	189.4	178.8	172.9	156.4
30°	156.4	161.3	165.2	154.5	144.8	149.6	144.8	139.9	129.2
32.5°	99.1	107.8	110.8	103.0	94.2	97.2	97.2	90.4	81.6
35°	55.4	69.0	77.7	68.0	54.4	65.1	70.0	60.2	48.6
37.5°	34.0	42.7	54.4	42.7	33.0	41.8	50.5	37.9	31.1
40°	20.4	26.2	38.9	26.2	19.4	25.3	35.0	23.3	18.5
42.5°	11.7	15.5	25.3	15.5	10.7	14.6	23.3	13.6	10.7
45°	5.8	8.7	15.5	8.7	5.8	8.7	14.6	7.8	5.8
47.5°	2.9	4.9	8.7	4.9	2.9	4.9	7.8	4.9	2.9
50°	1.0	1.9	4.9	1.9	1.0	1.9	4.9	1.9	1.9
52.5°	1.0	1.0	2.9	1.0	1.0	1.0	1.9	1.0	1.0
55°	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0
57.5°	1.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	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)