

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: P208766

Luminaire Tested: **LDSQA6A20835D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208766
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: LDSQA6A20835D010TE 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: 2014.7 lumens
Efficiency: N/A
Efficacy: 69.9 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

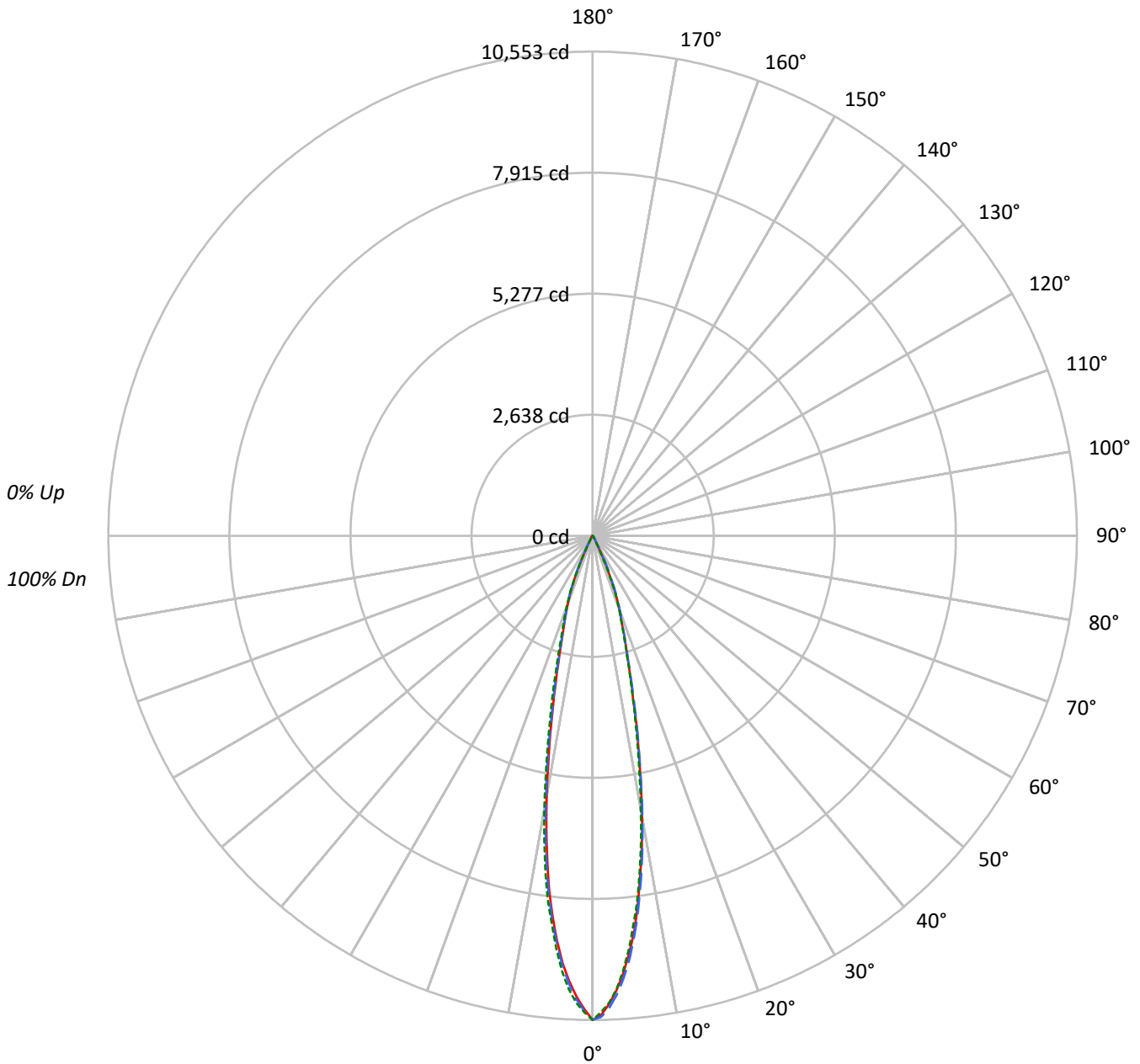
Input Watts (W): 28.81
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	454358	454358	454358
5°	394859	390822	383769
10°	271269	264671	251407
15°	141266	140017	128963
20°	78547	76870	72719
25°	25986	24076	28243
30°	5752	5325	4753
35°	2155	2118	1887
40°	849	809	770
45°	262	262	262
50°	47	47	94
55°	53	0	53
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°	770.8	38.3
10°-20°	893.4	44.3
20°-30°	310.5	15.4
30°-40°	33.1	1.6
40°-50°	6.3	0.3
50°-60°	0.6	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°	1974.6	98.0
0°-40°	2007.7	99.7
0°-60°	2014.6	100.0
0°-90°	2014.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2014.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	10553	10553	10553	10553	10553	
5°	9136	9247	9043	8931	8879	776
15°	3169	3238	3141	2959	2893	912
25°	547	711	507	621	594	296
35°	41	58	40	52	36	31
45°	4	12	4	11	4	4
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°	10552.8	10552.8	10552.8	10552.8	10552.8	10552.8	10552.8	10552.8	10552.8
1°	10455.7	10454.3	10491.7	10501.7	10388.2	10543.4	10358.7	10547.7	10319.9
2°	10220.7	10233.6	10297.6	10289.0	10189.8	10326.3	10109.3	10258.1	10053.2
3°	9922.4	9945.4	10019.4	10013.7	9897.9	10015.1	9785.1	9918.1	9725.4
4°	9557.2	9611.1	9673.0	9689.5	9513.4	9619.0	9395.5	9519.8	9336.6
5°	9136.0	9207.2	9246.7	9224.4	9042.6	9139.6	8931.1	9108.0	8879.4
6°	8660.2	8715.5	8745.0	8705.4	8504.2	8614.2	8419.4	8569.6	8346.0
7°	8093.7	8156.3	8180.0	8141.2	8001.7	8046.3	7851.5	7977.3	7768.1
8°	7464.8	7558.9	7562.5	7527.3	7382.8	7334.0	7222.5	7314.6	7116.2
9°	6847.3	6917.8	6916.3	6890.5	6730.9	6659.7	6551.2	6616.6	6440.5
10°	6204.7	6268.0	6246.4	6222.7	6053.8	5974.7	5870.5	5905.0	5750.4
11°	5524.0	5604.5	5570.0	5547.0	5378.8	5301.2	5197.0	5206.3	5070.4
12°	4836.1	4950.4	4909.4	4894.3	4739.1	4663.6	4569.4	4559.4	4430.7
13°	4258.9	4329.4	4289.1	4281.2	4144.6	4079.2	3927.5	3967.8	3850.6
14°	3642.9	3765.8	3729.9	3726.3	3614.1	3553.1	3412.9	3444.5	3342.4
15°	3169.2	3267.0	3238.2	3236.8	3141.2	3083.0	2958.6	2984.5	2893.2
16°	2737.9	2829.9	2809.1	2812.7	2727.9	2676.8	2569.0	2590.6	2517.3
17°	2437.5	2470.5	2451.1	2451.1	2380.7	2349.1	2256.3	2277.2	2219.7
18°	2138.4	2150.7	2162.9	2165.0	2103.2	2081.7	2004.0	2022.7	1975.3
19°	1893.3	1922.8	1930.0	1931.4	1876.8	1864.6	1797.7	1812.1	1773.3
20°	1714.3	1731.6	1733.8	1730.2	1677.7	1667.6	1608.0	1620.9	1587.1
21°	1507.3	1537.5	1531.1	1525.3	1470.7	1462.8	1412.5	1414.6	1381.5
22°	1276.6	1330.5	1323.3	1313.3	1239.2	1228.4	1215.5	1210.5	1178.8
23°	994.1	1119.9	1113.4	1099.1	991.2	1023.6	1015.7	1006.3	976.9
24°	762.7	910.7	907.1	884.8	741.8	822.3	813.7	805.8	782.8
25°	547.0	710.2	710.9	676.4	506.8	651.2	621.0	615.3	594.5
26°	391.0	528.3	531.9	482.3	311.2	470.1	448.5	440.6	424.1
27°	237.9	368.0	375.2	316.3	194.1	315.6	301.9	293.3	245.8
28°	163.9	240.1	248.7	195.5	151.7	210.6	194.1	184.0	143.0
29°	140.2	156.7	163.2	138.0	127.9	140.2	132.3	127.9	115.7
30°	115.7	119.3	122.2	114.3	107.1	110.7	107.1	103.5	95.6
32.5°	73.3	79.8	81.9	76.2	69.7	71.9	71.9	66.8	60.4
35°	41.0	51.0	57.5	50.3	40.3	48.2	51.8	44.6	35.9
37.5°	25.2	31.6	40.3	31.6	24.4	30.9	37.4	28.0	23.0
40°	15.1	19.4	28.8	19.4	14.4	18.7	25.9	17.3	13.7
42.5°	8.6	11.5	18.7	11.5	7.9	10.8	17.3	10.1	7.9
45°	4.3	6.5	11.5	6.5	4.3	6.5	10.8	5.8	4.3
47.5°	2.2	3.6	6.5	3.6	2.2	3.6	5.8	3.6	2.2
50°	0.7	1.4	3.6	1.4	0.7	1.4	3.6	1.4	1.4
52.5°	0.7	0.7	2.2	0.7	0.7	0.7	1.4	0.7	0.7
55°	0.7	0.7	0.7	0.7	0.0	0.7	0.7	0.7	0.7
57.5°	0.7	0.0	0.7	0.0	0.0	0.0	0.7	0.7	0.7
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	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)