

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: P208736

Luminaire Tested: **LDSQA6A20927D010TE LARL15SP 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208736
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29053)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQA6A20927D010TE LARL15SP 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 15° SPOT
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1339.3 lumens
Efficiency: N/A
Efficacy: 46.5 lumens/watt
Spacing Criteria (0/90/45): 0.31 / 0.31 / 0.36
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

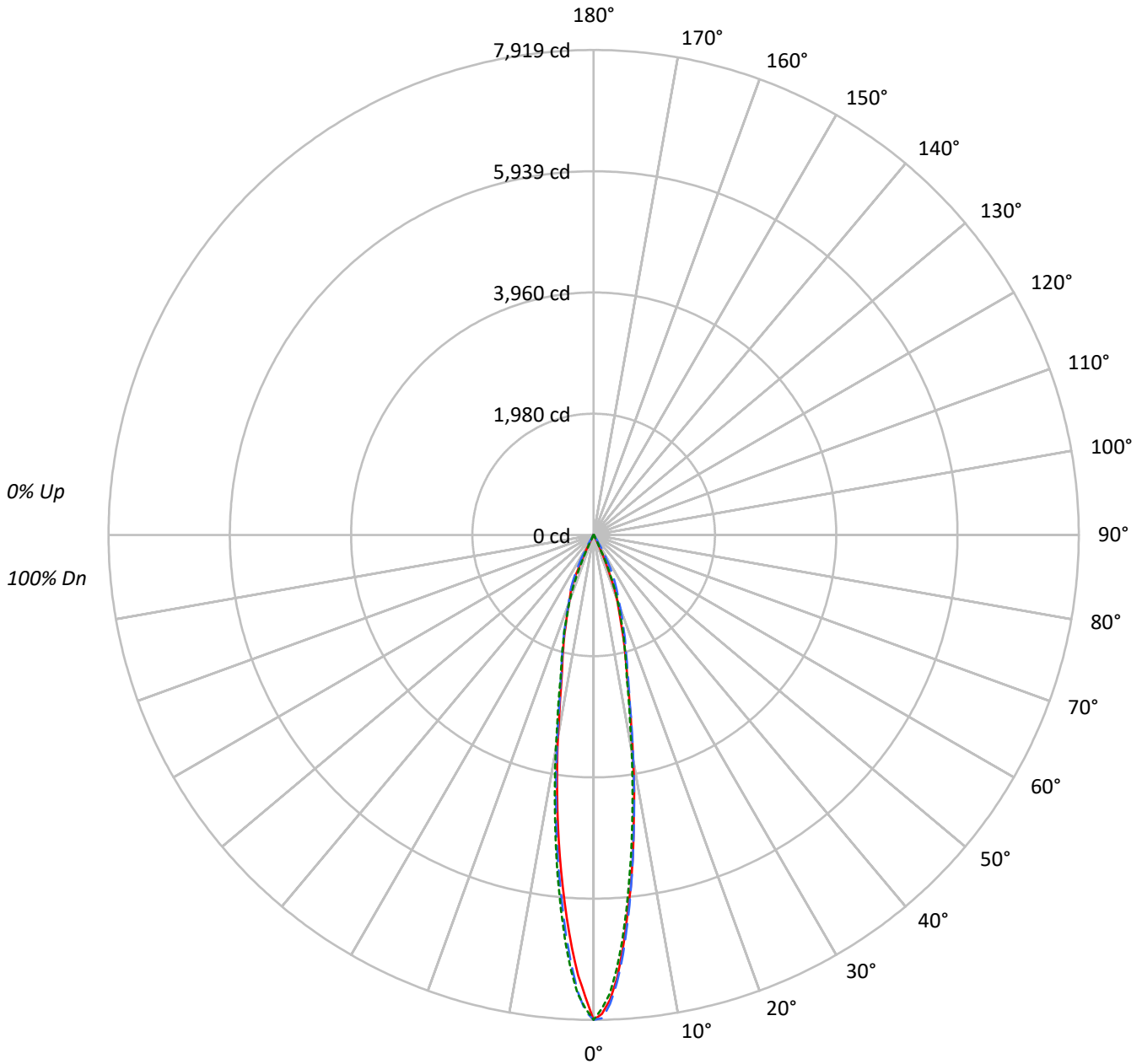
Input Watts (W): 28.81
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	100	99	99	97	97	97	97																
2	112	108	105	103	109	106	104	102	103	101	99	100	99	97	98	96	95	94	94	94	94																
3	108	104	100	97	106	102	99	97	100	97	95	98	95	94	96	94	92	91	91	91	91																
4	105	100	96	93	103	99	95	93	97	94	91	95	92	90	93	91	90	88	88	88	88																
5	102	96	92	89	101	95	92	89	94	91	88	92	90	88	91	89	87	86	86	86	86																
6	99	93	89	86	98	92	89	86	91	88	85	90	87	85	89	86	84	83	83	83	83																
7	97	90	86	83	95	90	86	83	89	85	83	88	85	82	87	84	82	81	81	81	81																
8	94	88	84	81	93	87	83	81	86	83	80	85	82	80	85	82	80	79	79	79	79																
9	92	85	81	79	91	85	81	79	84	81	78	83	80	78	83	80	78	77	77	77	77																
10	89	83	79	77	89	83	79	76	82	79	76	81	78	76	81	78	76	75	75	75	75																

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	340953	340953	340953
5°	271051	265268	249549
10°	161492	155542	146343
15°	88240	88387	85614
20°	50557	51954	53402
25°	13349	13877	24927
30°	1820	1685	1631
35°	731	699	673
40°	281	281	281
45°	134	104	134
50°	74	40	114
55°	45	0	83
60°	52	0	0
65°	61	0	0
70°	76	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°	502.9	37.5
10°-20°	565.9	42.3
20°-30°	252.0	18.8
30°-40°	15.4	1.1
40°-50°	2.5	0.2
50°-60°	0.4	0.0
60°-70°	0.1	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°	1320.8	98.6
0°-40°	1336.2	99.8
0°-60°	1339.1	100.0
0°-90°	1339.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1339.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7919	7919	7919	7919	7919	
5°	6271	6345	6138	5994	5774	516
15°	1980	2066	1983	1969	1921	558
25°	281	751	292	725	525	166
35°	14	22	13	23	13	10
45°	2	4	2	4	2	2
55°	1	1	0	1	1	1
65°	1	0	0	0	0	1
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°	7918.9	7918.9	7918.9	7918.9	7918.9	7918.9	7918.9	7918.9	7918.9
1°	7821.7	7893.4	7893.4	7876.2	7733.5	7839.5	7779.5	7715.1	7547.4
2°	7596.9	7669.6	7662.4	7596.9	7493.6	7537.4	7455.3	7375.3	7199.3
3°	7249.8	7328.1	7313.7	7245.4	7107.6	7134.3	7016.6	6956.1	6753.9
4°	6783.4	6882.8	6865.5	6790.0	6651.8	6650.1	6526.8	6463.0	6275.8
5°	6271.4	6375.2	6344.7	6282.5	6137.6	6111.5	5993.7	5948.2	5773.9
6°	5779.4	5844.4	5812.7	5761.1	5604.5	5588.4	5476.8	5437.9	5276.9
7°	5255.2	5300.2	5269.1	5229.1	5070.9	5049.8	4958.7	4928.2	4771.0
8°	4702.7	4767.1	4722.7	4697.7	4548.3	4519.5	4427.8	4407.3	4281.2
9°	4230.7	4252.4	4205.2	4130.2	4043.6	4014.2	3917.0	3897.0	3808.7
10°	3693.8	3760.9	3724.3	3659.9	3557.7	3579.9	3438.9	3422.2	3347.3
11°	3226.8	3297.3	3258.4	3200.7	3108.5	3121.3	3005.8	2935.8	2924.1
12°	2841.4	2873.6	2861.9	2815.3	2740.9	2744.8	2642.0	2586.0	2574.3
13°	2466.0	2523.8	2529.3	2491.0	2401.6	2442.7	2366.1	2320.5	2302.2
14°	2211.7	2255.6	2273.3	2272.2	2175.6	2211.7	2151.2	2114.5	2096.2
15°	1979.6	2036.8	2065.7	2064.0	1982.9	2019.6	1969.0	1940.2	1920.7
16°	1761.9	1840.2	1887.4	1879.6	1804.1	1841.9	1791.9	1763.6	1741.9
17°	1543.1	1650.9	1720.3	1705.3	1626.4	1674.2	1626.4	1602.0	1579.2
18°	1374.9	1463.2	1560.9	1528.7	1441.0	1515.4	1474.3	1454.8	1433.7
19°	1223.8	1284.4	1411.5	1354.3	1274.9	1359.3	1328.8	1313.2	1293.3
20°	1103.4	1155.5	1268.8	1201.1	1133.9	1202.7	1194.4	1182.2	1165.5
21°	949.0	1048.4	1139.4	1076.7	988.4	1085.6	1096.1	1089.5	1077.3
22°	751.3	930.1	1045.6	931.2	815.7	1000.1	1021.7	1016.7	1007.8
23°	584.7	790.7	959.0	797.4	635.2	905.1	937.3	934.0	904.6
24°	426.5	647.5	850.1	640.2	457.0	775.7	837.4	831.8	725.2
25°	281.0	504.2	750.7	480.3	292.1	627.5	725.2	715.8	524.7
26°	180.5	368.7	661.3	328.2	155.5	468.7	606.4	579.7	325.4
27°	86.6	257.1	552.0	193.2	75.5	312.6	486.4	427.0	157.1
28°	54.4	134.9	438.7	96.1	51.1	173.8	372.6	271.0	61.6
29°	44.4	66.6	324.8	54.4	41.6	80.0	267.1	132.2	42.8
30°	36.6	44.4	221.6	41.6	33.9	44.4	175.5	51.6	32.8
32.5°	23.3	27.8	51.1	26.1	22.2	25.5	41.6	25.0	20.5
35°	13.9	17.8	22.2	17.2	13.3	16.7	22.8	16.1	12.8
37.5°	8.3	10.6	14.4	10.6	8.3	10.6	14.4	10.6	7.8
40°	5.0	6.7	10.0	6.7	5.0	6.7	10.0	6.7	5.0
42.5°	3.3	3.9	6.7	3.9	2.8	3.9	6.7	4.4	3.3
45°	2.2	2.8	3.9	2.2	1.7	2.2	3.9	2.8	2.2
47.5°	1.7	1.7	2.2	1.1	1.1	1.7	2.8	2.2	1.7
50°	1.1	1.1	1.7	0.6	0.6	0.6	1.7	1.7	1.7
52.5°	0.6	0.6	0.6	0.0	0.0	0.0	1.1	1.1	1.1
55°	0.6	0.6	0.6	0.0	0.0	0.0	0.6	1.1	1.1
57.5°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	1.1	1.1
60°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	1.1	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.6	0.6	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°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)