

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: P208739

Luminaire Tested: **LDSQA6A20940D010TE LARL15SP 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208739
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: LDSQA6A20940D010TE LARL15SP 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 15° SPOT
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1527.5 lumens
Efficiency: N/A
Efficacy: 53.0 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

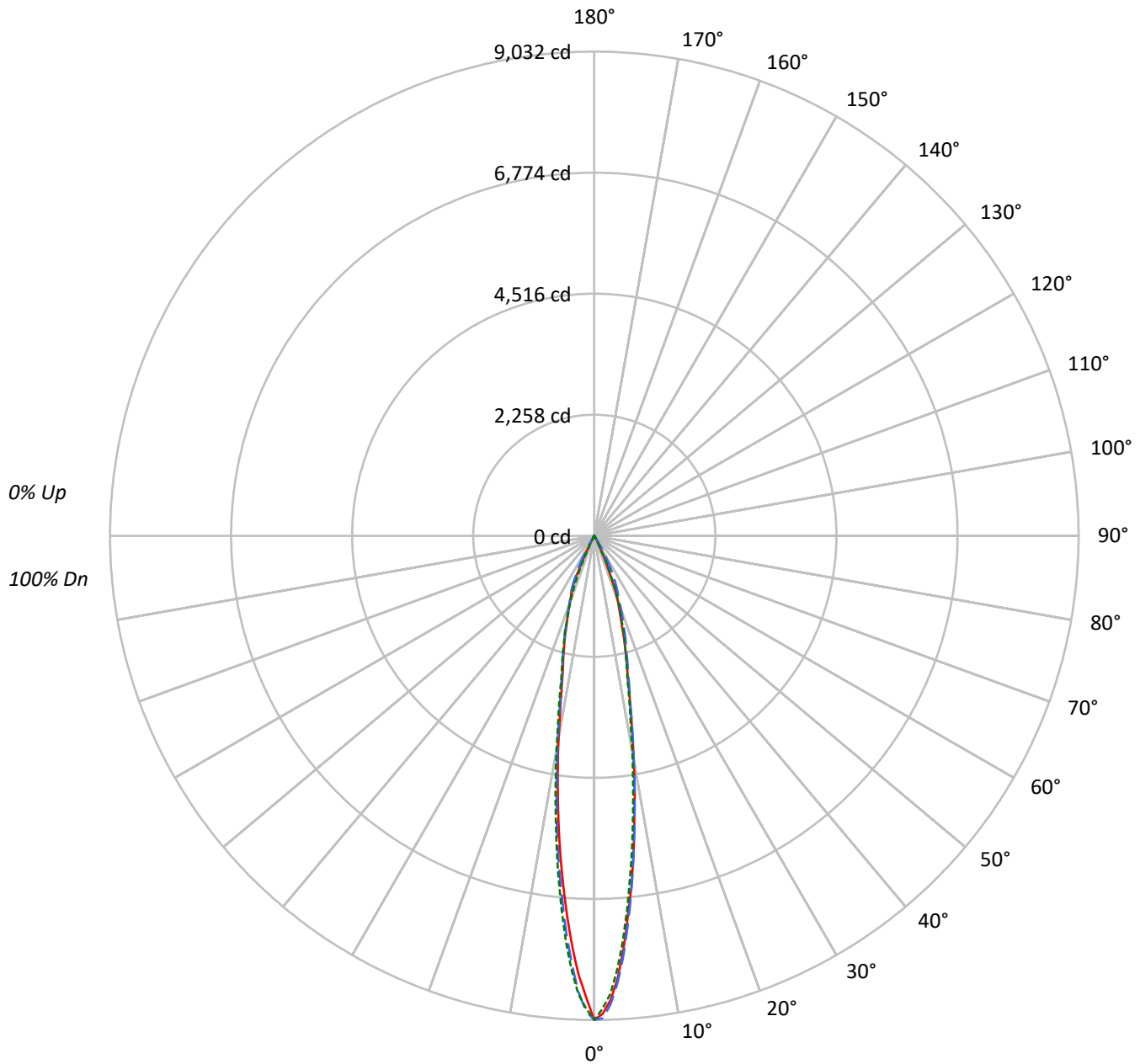
Input Watts (W): 28.81
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	115	113	111	110	113	111	109	108	107	106	105	103	102	101	100	99	99	97	97	97
2	112	108	105	103	109	106	104	102	103	101	99	100	99	97	98	96	95	94	94	94
3	108	104	100	97	106	102	99	97	100	97	95	98	95	94	96	94	92	91	91	91
4	105	100	96	93	103	99	95	93	97	94	91	95	92	90	93	91	90	88	88	88
5	102	96	92	89	101	95	92	89	94	91	88	92	90	88	91	89	87	86	86	86
6	99	93	89	86	98	92	89	86	91	88	85	90	87	85	89	86	84	83	83	83
7	97	90	86	83	95	90	86	83	89	85	83	88	85	82	87	84	82	81	81	81
8	94	88	84	81	93	87	83	81	86	83	80	85	82	80	85	82	80	79	79	79
9	92	85	81	79	91	85	81	79	84	81	78	83	80	78	83	80	78	77	77	77
10	89	83	79	77	89	83	79	76	82	79	76	81	78	76	81	78	76	75	75	75

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	388874	388874	388874
5°	309145	302550	284622
10°	184187	177406	166909
15°	100640	100810	97649
20°	57658	59258	60912
25°	15226	15824	28433
30°	2078	1919	1859
35°	830	799	767
40°	320	320	320
45°	152	116	152
50°	87	40	127
55°	45	0	98
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°	573.6	37.6
10°-20°	645.5	42.3
20°-30°	287.4	18.8
30°-40°	17.5	1.1
40°-50°	2.8	0.2
50°-60°	0.5	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°	1506.5	98.6
0°-40°	1524.0	99.8
0°-60°	1527.3	100.0
0°-90°	1527.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1527.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	9032	9032	9032	9032	9032	
5°	7153	7236	7000	6836	6585	588
15°	2258	2356	2262	2246	2191	637
25°	320	856	333	827	598	189
35°	16	25	15	26	15	11
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°	9031.9	9031.9	9031.9	9031.9	9031.9	9031.9	9031.9	9031.9	9031.9
1°	8921.1	9002.8	9002.8	8983.2	8820.4	8941.4	8873.0	8799.5	8608.2
2°	8664.6	8747.6	8739.3	8664.6	8546.8	8596.8	8503.1	8411.9	8211.1
3°	8268.8	8358.1	8341.6	8263.7	8106.6	8137.0	8002.8	7933.7	7703.2
4°	7736.8	7850.1	7830.5	7744.4	7586.7	7584.8	7444.2	7371.3	7157.9
5°	7152.8	7271.3	7236.4	7165.5	7000.2	6970.4	6836.2	6784.2	6585.4
6°	6591.7	6665.8	6629.7	6570.8	6392.2	6373.8	6246.5	6202.2	6018.5
7°	5993.8	6045.1	6009.7	5964.1	5783.6	5759.5	5655.6	5620.8	5441.6
8°	5363.7	5437.1	5386.5	5358.0	5187.6	5154.7	5050.2	5026.8	4883.0
9°	4825.4	4850.1	4796.2	4710.7	4611.9	4578.4	4467.5	4444.7	4344.0
10°	4212.9	4289.6	4247.8	4174.3	4057.8	4083.1	3922.2	3903.2	3817.7
11°	3680.3	3760.7	3716.4	3650.5	3545.4	3560.0	3428.2	3348.4	3335.1
12°	3240.8	3277.5	3264.2	3211.0	3126.1	3130.6	3013.4	2949.4	2936.1
13°	2812.6	2878.5	2884.8	2841.1	2739.2	2786.0	2698.6	2646.7	2625.8
14°	2522.6	2572.6	2592.9	2591.6	2481.4	2522.6	2453.5	2411.7	2390.8
15°	2257.8	2323.1	2356.0	2354.1	2261.6	2303.4	2245.8	2212.9	2190.7
16°	2009.6	2098.9	2152.7	2143.8	2057.7	2100.8	2043.8	2011.5	1986.8
17°	1760.0	1882.9	1962.1	1945.0	1855.0	1909.5	1855.0	1827.2	1801.2
18°	1568.1	1668.8	1780.3	1743.6	1643.5	1728.4	1681.5	1659.3	1635.3
19°	1395.9	1464.9	1609.9	1544.7	1454.1	1550.4	1515.6	1497.8	1475.0
20°	1258.4	1318.0	1447.2	1369.9	1293.3	1371.8	1362.3	1348.4	1329.4
21°	1082.4	1195.7	1299.6	1228.0	1127.3	1238.2	1250.2	1242.6	1228.7
22°	856.9	1060.8	1192.6	1062.1	930.4	1140.6	1165.3	1159.6	1149.5
23°	666.9	901.9	1093.8	909.5	724.5	1032.3	1069.1	1065.3	1031.7
24°	486.4	738.5	969.6	730.2	521.2	884.8	955.1	948.7	827.1
25°	320.5	575.1	856.3	547.8	333.1	715.7	827.1	816.4	598.5
26°	205.8	420.5	754.3	374.3	177.3	534.5	691.6	661.2	371.1
27°	98.8	293.2	629.5	220.4	86.1	356.6	554.8	487.0	179.2
28°	62.1	153.9	500.3	109.6	58.3	198.2	425.0	309.1	70.3
29°	50.7	76.0	370.5	62.1	47.5	91.2	304.6	150.7	48.8
30°	41.8	50.7	252.7	47.5	38.6	50.7	200.1	58.9	37.4
32.5°	26.6	31.7	58.3	29.8	25.3	29.1	47.5	28.5	23.4
35°	15.8	20.3	25.3	19.6	15.2	19.0	26.0	18.4	14.6
37.5°	9.5	12.0	16.5	12.0	9.5	12.0	16.5	12.0	8.9
40°	5.7	7.6	11.4	7.6	5.7	7.6	11.4	7.6	5.7
42.5°	3.8	4.4	7.6	4.4	3.2	4.4	7.6	5.1	3.8
45°	2.5	3.2	4.4	2.5	1.9	2.5	4.4	3.2	2.5
47.5°	1.9	1.9	2.5	1.3	1.3	1.9	3.2	2.5	1.9
50°	1.3	1.3	1.9	0.6	0.6	0.6	1.9	1.9	1.9
52.5°	0.6	0.6	0.6	0.0	0.0	0.0	1.3	1.3	1.3
55°	0.6	0.6	0.6	0.0	0.0	0.0	0.6	1.3	1.3
57.5°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	1.3	1.3
60°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	1.3	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)