

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: P208727

Luminaire Tested: **LDSQA6A15840D010TE LARL15SP 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208727
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: LDSQA6A15840D010TE LARL15SP 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 15° SPOT
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1500.7 lumens
Efficiency: N/A
Efficacy: 68.9 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

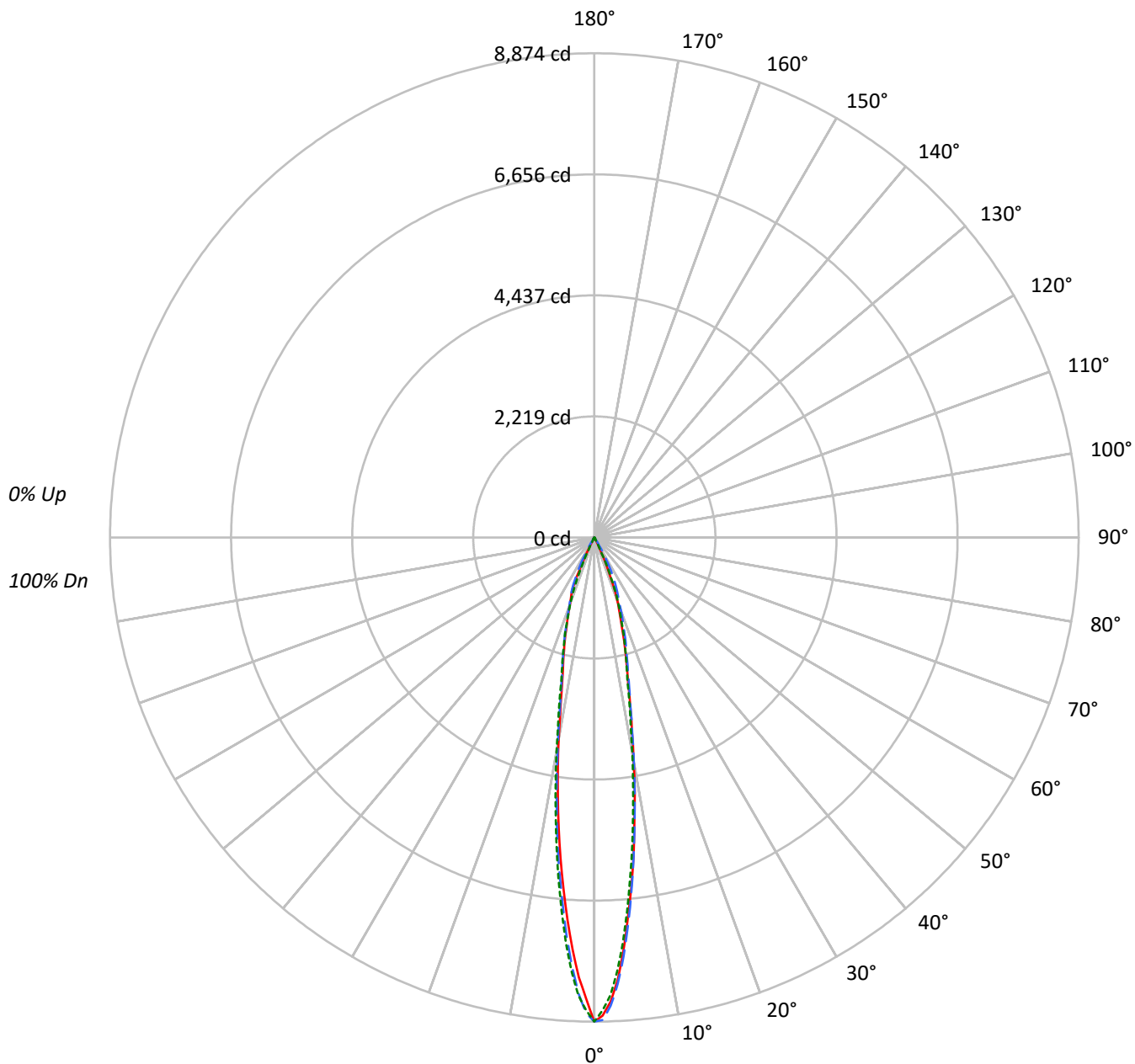
Input Watts (W): 21.79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	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			100
1	115	113	111	110	113	111	109	108		107	106	105			103	102	101			97
2	112	108	105	103	109	106	104	102		103	101	99			100	99	97			94
3	108	104	100	97	106	102	99	97		100	97	95			98	95	94			91
4	105	100	96	93	103	99	95	93		97	94	91			95	92	90			88
5	102	96	92	89	101	95	92	89		94	91	88			92	90	88			86
6	99	93	89	86	98	92	89	86		91	88	85			90	87	85			83
7	97	90	86	83	95	90	86	83		89	85	83			88	85	82			81
8	94	88	84	81	93	87	83	81		86	83	80			85	82	80			79
9	92	85	81	79	91	85	81	79		84	81	78			83	80	78			77
10	89	83	79	77	89	83	79	76		82	79	76			81	78	76			75

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	382054	382054	382054
5°	303725	297242	279630
10°	180957	174294	163984
15°	98875	99045	95938
20°	56650	58217	59839
25°	14955	15549	27934
30°	2043	1889	1825
35°	820	783	752
40°	315	315	315
45°	152	116	152
50°	80	40	127
55°	45	0	90
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°	563.5	37.6
10°-20°	634.1	42.3
20°-30°	282.4	18.8
30°-40°	17.2	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°	1480.0	98.6
0°-40°	1497.2	99.8
0°-60°	1500.5	100.0
0°-90°	1500.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1500.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8874	8874	8874	8874	8874	
5°	7027	7110	6877	6716	6470	578
15°	2218	2315	2222	2206	2152	625
25°	315	841	327	813	588	186
35°	16	25	15	26	14	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°	8873.5	8873.5	8873.5	8873.5	8873.5	8873.5	8873.5	8873.5	8873.5
1°	8764.6	8844.9	8844.9	8825.6	8665.7	8784.5	8717.3	8645.2	8457.2
2°	8512.6	8594.1	8586.0	8512.6	8396.9	8446.0	8354.0	8264.4	8067.1
3°	8123.7	8211.5	8195.3	8118.8	7964.4	7994.3	7862.4	7794.6	7568.1
4°	7601.1	7712.4	7693.2	7608.5	7453.6	7451.7	7313.6	7242.0	7032.4
5°	7027.4	7143.7	7109.5	7039.8	6877.4	6848.2	6716.3	6665.2	6469.9
6°	6476.1	6548.9	6513.4	6455.6	6280.1	6262.0	6137.0	6093.4	5913.0
7°	5888.7	5939.1	5904.3	5859.5	5682.1	5658.5	5556.4	5522.2	5346.1
8°	5269.6	5341.8	5292.0	5264.0	5096.6	5064.3	4961.6	4938.6	4797.3
9°	4740.7	4765.0	4712.1	4628.1	4531.0	4498.0	4389.2	4366.8	4267.8
10°	4139.0	4214.3	4173.2	4101.1	3986.6	4011.5	3853.4	3834.8	3750.8
11°	3615.7	3694.8	3651.2	3586.5	3483.2	3497.5	3368.1	3289.7	3276.6
12°	3183.9	3220.0	3206.9	3154.7	3071.3	3075.6	2960.5	2897.7	2884.6
13°	2763.3	2828.0	2834.2	2791.3	2691.1	2737.2	2651.3	2600.3	2579.7
14°	2478.3	2527.5	2547.4	2546.1	2437.9	2478.3	2410.5	2369.4	2348.9
15°	2218.2	2282.3	2314.7	2312.8	2222.0	2263.0	2206.4	2174.0	2152.3
16°	1974.3	2062.0	2114.9	2106.2	2021.6	2063.9	2007.9	1976.2	1951.9
17°	1729.2	1849.9	1927.6	1910.8	1822.5	1876.0	1822.5	1795.1	1769.6
18°	1540.6	1639.6	1749.1	1713.0	1614.7	1698.0	1652.0	1630.2	1606.6
19°	1371.4	1439.2	1581.7	1517.6	1428.6	1523.2	1489.0	1471.6	1449.2
20°	1236.4	1294.8	1421.8	1345.9	1270.6	1347.7	1338.4	1324.7	1306.0
21°	1063.4	1174.8	1276.8	1206.5	1107.6	1216.4	1228.3	1220.8	1207.1
22°	841.9	1042.2	1171.6	1043.5	914.0	1120.6	1144.9	1139.3	1129.3
23°	655.2	886.0	1074.6	893.5	711.8	1014.2	1050.3	1046.6	1013.6
24°	477.9	725.5	952.6	717.4	512.1	869.2	938.3	932.1	812.6
25°	314.8	565.0	841.2	538.2	327.3	703.1	812.6	802.0	588.0
26°	202.2	413.2	741.1	367.7	174.2	525.2	679.5	649.6	364.6
27°	97.1	288.1	618.5	216.5	84.6	350.3	545.1	478.5	176.1
28°	61.0	151.2	491.6	107.6	57.2	194.8	417.5	303.6	69.1
29°	49.8	74.7	364.0	61.0	46.7	89.6	299.3	148.1	47.9
30°	41.1	49.8	248.3	46.7	38.0	49.8	196.6	57.9	36.7
32.5°	26.1	31.1	57.2	29.2	24.9	28.6	46.7	28.0	23.0
35°	15.6	19.9	24.9	19.3	14.9	18.7	25.5	18.0	14.3
37.5°	9.3	11.8	16.2	11.8	9.3	11.8	16.2	11.8	8.7
40°	5.6	7.5	11.2	7.5	5.6	7.5	11.2	7.5	5.6
42.5°	3.7	4.4	7.5	4.4	3.1	4.4	7.5	5.0	3.7
45°	2.5	3.1	4.4	2.5	1.9	2.5	4.4	3.1	2.5
47.5°	1.9	1.9	2.5	1.2	1.2	1.9	3.1	2.5	1.9
50°	1.2	1.2	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	1.2	1.2	1.2
55°	0.6	0.6	0.6	0.0	0.0	0.0	0.6	1.2	1.2
57.5°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	1.2	1.2
60°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	1.2	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



Report Generated By E9808895 / USPTCWHP6082093





— 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)