

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: P208763

Luminaire Tested: **LDSQA6A15940D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208763
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: LDSQA6A15940D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1465.2 lumens
Efficiency: N/A
Efficacy: 67.2 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

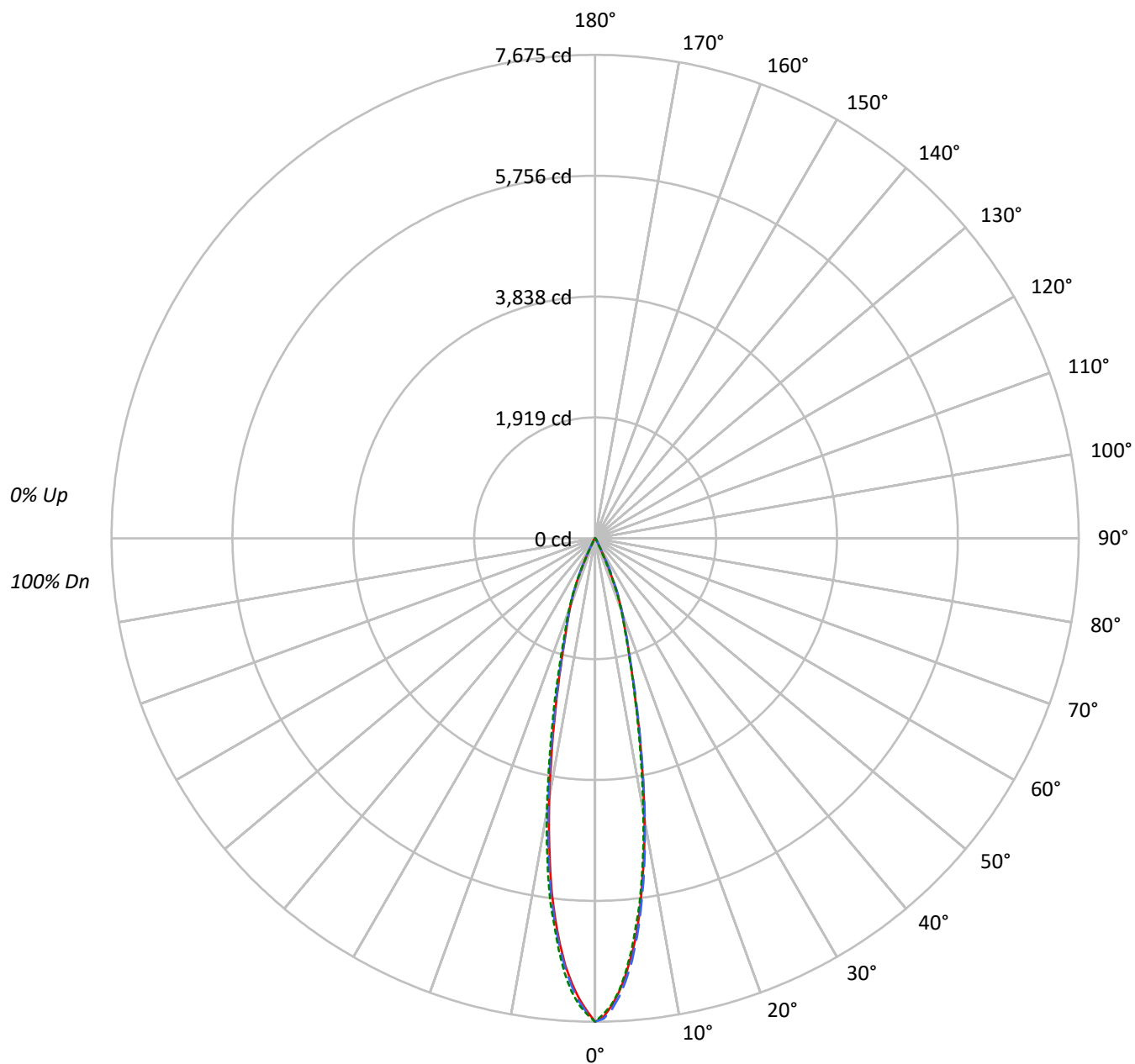
Input Watts (W): 21.79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	330452	330452	330452
5°	287180	284241	279111
10°	197295	192494	182850
15°	102740	101835	93794
20°	57127	55908	52889
25°	18898	17511	20537
30°	4186	3873	3455
35°	1566	1540	1372
40°	618	590	556
45°	189	189	189
50°	33	33	67
55°	38	0	38
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°	560.6	38.3
10°-20°	649.7	44.3
20°-30°	225.8	15.4
30°-40°	24.0	1.6
40°-50°	4.6	0.3
50°-60°	0.5	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°	1436.1	98.0
0°-40°	1460.2	99.7
0°-60°	1465.2	100.0
0°-90°	1465.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1465.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7675	7675	7675	7675	7675	
5°	6645	6725	6577	6496	6458	565
15°	2305	2355	2285	2152	2104	663
25°	398	517	369	452	432	215
35°	30	42	29	38	26	23
45°	3	8	3	8	3	3
55°	0	0	0	0	0	0
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	7675.0	7675.0	7675.0	7675.0	7675.0	7675.0	7675.0	7675.0	7675.0
1°	7604.4	7603.3	7630.5	7637.8	7555.2	7668.2	7533.8	7671.3	7505.6
2°	7433.4	7442.8	7489.4	7483.1	7411.0	7510.3	7352.4	7460.6	7311.6
3°	7216.5	7233.2	7287.1	7282.9	7198.7	7283.9	7116.6	7213.3	7073.2
4°	6950.9	6990.1	7035.1	7047.1	6919.0	6995.9	6833.3	6923.7	6790.4
5°	6644.6	6696.3	6725.1	6708.9	6576.6	6647.2	6495.6	6624.2	6457.9
6°	6298.5	6338.7	6360.2	6331.4	6185.0	6265.0	6123.3	6232.6	6070.0
7°	5886.5	5932.0	5949.3	5921.0	5819.6	5852.0	5710.3	5801.8	5649.7
8°	5429.1	5497.6	5500.2	5474.6	5369.5	5333.9	5252.9	5319.8	5175.5
9°	4980.0	5031.3	5030.2	5011.4	4895.3	4843.6	4764.6	4812.2	4684.1
10°	4512.7	4558.7	4543.0	4525.7	4402.9	4345.4	4269.6	4294.7	4182.3
11°	4017.6	4076.1	4051.0	4034.3	3912.0	3855.5	3779.7	3786.5	3687.7
12°	3517.3	3600.4	3570.6	3559.6	3446.7	3391.8	3323.3	3316.0	3222.4
13°	3097.5	3148.7	3119.4	3113.7	3014.4	2966.8	2856.5	2885.8	2800.5
14°	2649.5	2738.9	2712.7	2710.1	2628.5	2584.1	2482.2	2505.2	2430.9
15°	2304.9	2376.0	2355.1	2354.1	2284.6	2242.2	2151.8	2170.6	2104.2
16°	1991.3	2058.2	2043.0	2045.6	1984.0	1946.8	1868.4	1884.1	1830.8
17°	1772.8	1796.8	1782.7	1782.7	1731.5	1708.5	1641.0	1656.2	1614.4
18°	1555.3	1564.2	1573.1	1574.6	1529.7	1514.0	1457.5	1471.1	1436.6
19°	1377.0	1398.4	1403.7	1404.7	1365.0	1356.1	1307.5	1317.9	1289.7
20°	1246.8	1259.4	1261.0	1258.3	1220.2	1212.9	1169.5	1178.9	1154.3
21°	1096.3	1118.2	1113.5	1109.3	1069.6	1063.9	1027.3	1028.8	1004.8
22°	928.5	967.7	962.4	955.1	901.3	893.4	884.0	880.4	857.4
23°	723.0	814.5	809.8	799.3	720.9	744.4	738.7	731.9	710.5
24°	554.7	662.4	659.8	643.5	539.5	598.1	591.8	586.0	569.3
25°	397.8	516.5	517.0	491.9	368.6	473.6	451.7	447.5	432.3
26°	284.4	384.2	386.9	350.8	226.4	341.9	326.2	320.5	308.4
27°	173.0	267.7	272.9	230.0	141.2	229.5	219.6	213.3	178.8
28°	119.2	174.6	180.9	142.2	110.3	153.2	141.2	133.8	104.0
29°	101.9	114.0	118.7	100.4	93.1	101.9	96.2	93.1	84.2
30°	84.2	86.8	88.9	83.1	77.9	80.5	77.9	75.3	69.5
32.5°	53.3	58.0	59.6	55.4	50.7	52.3	52.3	48.6	43.9
35°	29.8	37.1	41.8	36.6	29.3	35.0	37.6	32.4	26.1
37.5°	18.3	23.0	29.3	23.0	17.8	22.5	27.2	20.4	16.7
40°	11.0	14.1	20.9	14.1	10.5	13.6	18.8	12.5	9.9
42.5°	6.3	8.4	13.6	8.4	5.8	7.8	12.5	7.3	5.8
45°	3.1	4.7	8.4	4.7	3.1	4.7	7.8	4.2	3.1
47.5°	1.6	2.6	4.7	2.6	1.6	2.6	4.2	2.6	1.6
50°	0.5	1.0	2.6	1.0	0.5	1.0	2.6	1.0	1.0
52.5°	0.5	0.5	1.6	0.5	0.5	0.5	1.0	0.5	0.5
55°	0.5	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.5
57.5°	0.5	0.0	0.5	0.0	0.0	0.0	0.5	0.5	0.5
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	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)