

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: P208775

Luminaire Tested: **LDSQA6A30840D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208775
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: LDSQA6A30840D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2939.4 lumens
Efficiency: N/A
Efficacy: 65.9 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

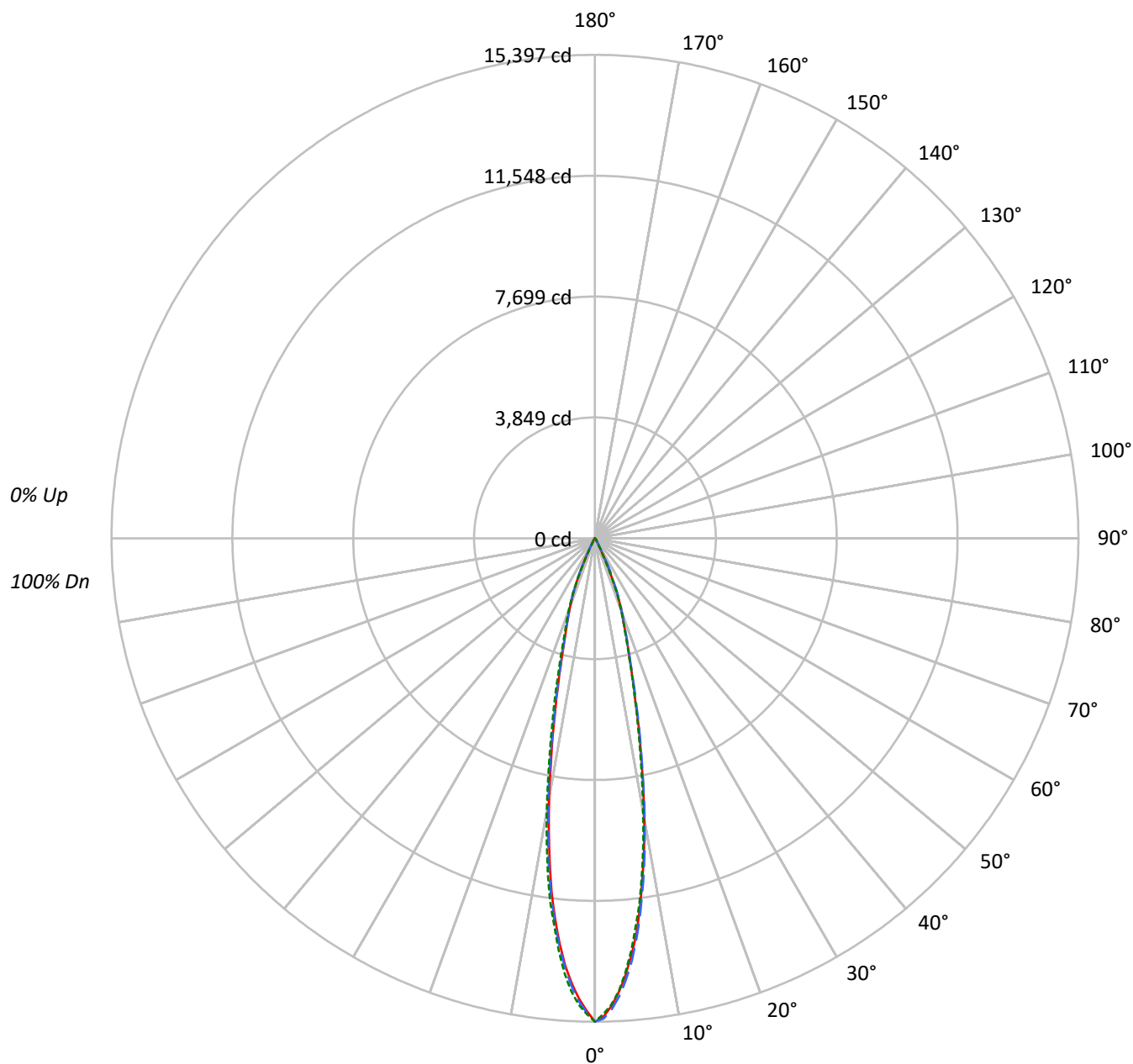
Input Watts (W): 44.62
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	662924	662924	662924
5°	576116	570225	559934
10°	395792	386164	366814
15°	206112	204289	188162
20°	114607	112155	106103
25°	37915	35126	41203
30°	8397	7771	6935
35°	3143	3085	2754
40°	1237	1180	1118
45°	384	384	384
50°	67	67	141
55°	75	0	75
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°	1124.6	38.3
10°-20°	1303.5	44.3
20°-30°	453.0	15.4
30°-40°	48.2	1.6
40°-50°	9.2	0.3
50°-60°	0.9	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°	2881.0	98.0
0°-40°	2929.3	99.7
0°-60°	2939.4	100.0
0°-90°	2939.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2939.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	15397	15397	15397	15397	15397	
5°	13330	13491	13194	13031	12955	1133
15°	4624	4725	4583	4317	4221	1330
25°	798	1037	739	906	867	432
35°	60	84	59	76	52	45
45°	6	17	6	16	6	6
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	15396.9	15396.9	15396.9	15396.9	15396.9	15396.9	15396.9	15396.9	15396.9
1°	15255.3	15253.2	15307.8	15322.5	15156.8	15383.3	15113.8	15389.6	15057.1
2°	14912.4	14931.3	15024.6	15012.0	14867.3	15066.6	14749.8	14966.9	14668.0
3°	14477.2	14510.7	14618.7	14610.4	14441.5	14612.5	14276.8	14470.9	14189.8
4°	13944.4	14023.0	14113.2	14137.4	13880.4	14034.6	13708.4	13889.9	13622.4
5°	13329.8	13433.6	13491.3	13458.8	13193.5	13335.1	13030.9	13288.9	12955.4
6°	12635.5	12716.3	12759.3	12701.6	12407.9	12568.4	12284.2	12503.4	12177.2
7°	11809.1	11900.3	11935.0	11878.3	11674.9	11739.9	11455.7	11639.2	11334.0
8°	10891.4	11028.8	11034.1	10982.7	10771.9	10700.6	10538.0	10672.2	10382.8
9°	9990.5	10093.3	10091.2	10053.5	9820.6	9716.8	9558.5	9653.9	9396.9
10°	9052.9	9145.2	9113.8	9079.2	8832.7	8717.3	8565.3	8615.6	8390.1
11°	8059.8	8177.2	8126.9	8093.3	7847.9	7734.6	7582.6	7596.2	7398.0
12°	7056.1	7222.8	7163.1	7141.0	6914.5	6804.4	6667.0	6652.3	6464.6
13°	6213.9	6316.7	6258.0	6246.4	6047.2	5951.7	5730.5	5789.2	5618.2
14°	5315.1	5494.5	5442.0	5436.8	5273.2	5184.0	4979.5	5025.7	4876.8
15°	4624.0	4766.6	4724.7	4722.6	4583.1	4498.2	4316.7	4354.5	4221.3
16°	3994.7	4129.0	4098.6	4103.8	3980.1	3905.6	3748.3	3779.8	3672.8
17°	3556.4	3604.6	3576.3	3576.3	3473.5	3427.4	3292.1	3322.5	3238.6
18°	3120.1	3137.9	3155.7	3158.9	3068.7	3037.2	2924.0	2951.2	2882.0
19°	2762.4	2805.4	2815.9	2818.0	2738.3	2720.5	2623.0	2643.9	2587.3
20°	2501.3	2526.5	2529.6	2524.4	2447.8	2433.1	2346.1	2365.0	2315.7
21°	2199.3	2243.3	2233.9	2225.5	2145.8	2134.2	2060.8	2064.0	2015.7
22°	1862.6	1941.3	1930.8	1916.1	1808.1	1792.3	1773.5	1766.1	1720.0
23°	1450.4	1634.0	1624.5	1603.6	1446.2	1493.4	1481.9	1468.3	1425.3
24°	1112.7	1328.8	1323.5	1291.0	1082.3	1199.8	1187.2	1175.7	1142.1
25°	798.1	1036.2	1037.2	986.9	739.4	950.2	906.1	897.7	867.3
26°	570.5	770.8	776.1	703.7	454.1	685.9	654.4	642.9	618.8
27°	347.1	537.0	547.5	461.5	283.2	460.4	440.5	427.9	358.7
28°	239.1	350.3	362.9	285.3	221.3	307.3	283.2	268.5	208.7
29°	204.5	228.6	238.1	201.4	186.7	204.5	193.0	186.7	168.9
30°	168.9	174.1	178.3	166.8	156.3	161.5	156.3	151.0	139.5
32.5°	107.0	116.4	119.6	111.2	101.7	104.9	104.9	97.5	88.1
35°	59.8	74.5	83.9	73.4	58.7	70.3	75.5	65.0	52.4
37.5°	36.7	46.1	58.7	46.1	35.7	45.1	54.5	40.9	33.6
40°	22.0	28.3	42.0	28.3	21.0	27.3	37.8	25.2	19.9
42.5°	12.6	16.8	27.3	16.8	11.5	15.7	25.2	14.7	11.5
45°	6.3	9.4	16.8	9.4	6.3	9.4	15.7	8.4	6.3
47.5°	3.1	5.2	9.4	5.2	3.1	5.2	8.4	5.2	3.1
50°	1.0	2.1	5.2	2.1	1.0	2.1	5.2	2.1	2.1
52.5°	1.0	1.0	3.1	1.0	1.0	1.0	2.1	1.0	1.0
55°	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0
57.5°	1.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	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)