

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: P1219600

Luminaire Tested: **LDSQA6A20950D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-41-14
Report Number: P1219600
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: LDSQA6A20950D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

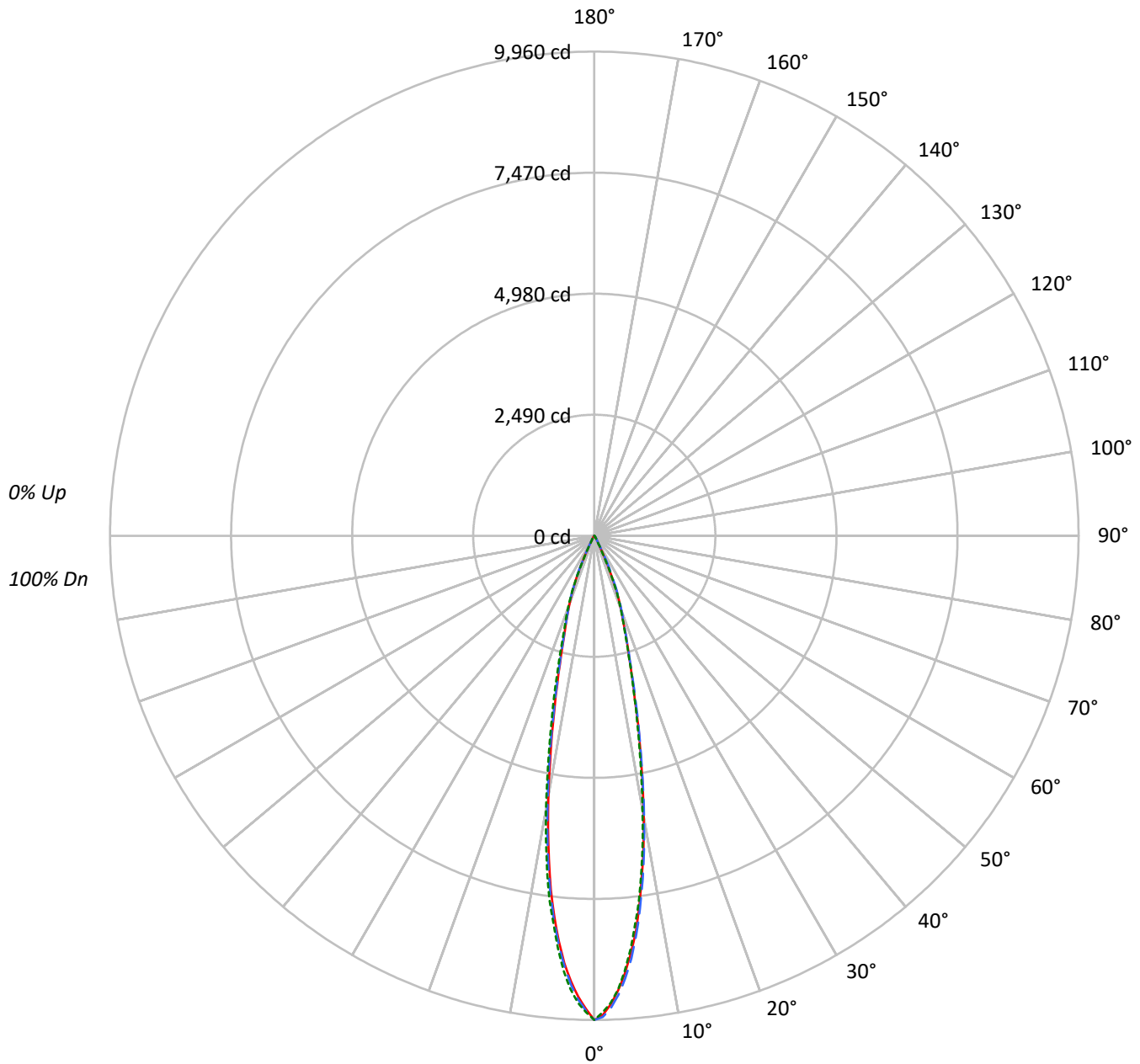
Lumens per Lamp: N/A
Luminaire Lumens: 1901.5 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Spacing Criteria (0/90/45): 0.37 / 0.38 / 0.39
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 24.8
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		
1	115	113	111	110	113	111	109	108	107	106	105	103	102	102	100	99	99	97		
2	112	108	105	103	110	107	104	102	103	101	100	101	99	97	98	97	95	94		
3	108	104	100	98	107	103	99	97	100	98	95	98	96	94	96	94	93	91		
4	105	100	96	93	104	99	96	93	97	94	92	95	93	91	94	92	90	89		
5	102	97	93	90	101	96	92	89	94	91	89	93	90	88	91	89	87	86		
6	99	94	90	87	98	93	89	86	92	88	86	90	88	85	89	87	85	84		
7	97	91	87	84	96	90	86	84	89	86	83	88	85	83	87	85	83	82		
8	94	88	84	82	93	88	84	81	87	83	81	86	83	81	85	82	80	80		
9	92	86	82	79	91	85	82	79	85	81	79	84	81	79	83	80	78	78		
10	90	84	80	77	89	83	80	77	83	79	77	82	79	77	81	79	77	76		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	428830	428830	428830
5°	372674	368866	362206
10°	256028	249802	237285
15°	133331	132150	121720
20°	74135	72550	68637
25°	24532	22722	26656
30°	5434	5026	4484
35°	2034	2003	1787
40°	798	764	725
45°	250	250	250
50°	40	40	94
55°	45	0	45
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°	727.5	38.3
10°-20°	843.2	44.3
20°-30°	293.0	15.4
30°-40°	31.2	1.6
40°-50°	6.0	0.3
50°-60°	0.6	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°	1863.7	98.0
0°-40°	1894.9	99.7
0°-60°	1901.4	100.0
0°-90°	1901.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1901.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	9960	9960	9960	9960	9960	
5°	8623	8727	8535	8429	8380	733
15°	2991	3056	2965	2792	2731	861
25°	516	671	478	586	561	280
35°	39	54	38	49	34	29
45°	4	11	4	10	4	4
55°	1	1	0	1	1	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°	9959.9	9959.9	9959.9	9959.9	9959.9	9959.9	9959.9	9959.9	9959.9
1°	9868.4	9867.0	9902.3	9911.8	9804.6	9951.1	9776.7	9955.2	9740.1
2°	9646.5	9658.7	9719.1	9711.0	9617.3	9746.3	9541.4	9681.8	9488.4
3°	9365.0	9386.7	9456.5	9451.1	9341.9	9452.5	9235.3	9360.9	9179.1
4°	9020.3	9071.2	9129.5	9145.1	8978.9	9078.7	8867.7	8985.0	8812.0
5°	8622.7	8689.9	8727.3	8706.2	8534.6	8626.2	8429.4	8596.2	8380.5
6°	8173.7	8225.9	8253.8	8216.4	8026.4	8130.2	7946.3	8088.2	7877.2
7°	7639.0	7698.1	7720.4	7683.8	7552.2	7594.3	7410.4	7529.2	7331.7
8°	7045.4	7134.3	7137.7	7104.4	6968.0	6922.0	6816.8	6903.6	6716.4
9°	6462.7	6529.2	6527.8	6503.3	6352.7	6285.6	6183.2	6244.9	6078.7
10°	5856.1	5915.9	5895.6	5873.2	5713.7	5639.1	5540.7	5573.3	5427.4
11°	5213.7	5289.6	5257.1	5235.4	5076.7	5003.3	4905.1	4913.8	4785.6
12°	4564.5	4672.4	4633.7	4619.5	4472.9	4401.7	4312.8	4303.2	4181.8
13°	4019.7	4086.2	4048.2	4040.7	3911.9	3850.1	3706.9	3744.9	3634.4
14°	3438.2	3554.2	3520.4	3517.0	3411.1	3353.5	3221.2	3250.9	3154.7
15°	2991.2	3083.5	3056.4	3055.0	2964.7	2909.8	2792.4	2816.8	2730.7
16°	2584.2	2670.9	2651.4	2654.6	2574.6	2526.5	2424.7	2445.0	2375.8
17°	2300.5	2331.8	2313.5	2313.5	2246.9	2217.1	2129.5	2149.3	2095.0
18°	2018.3	2029.8	2041.4	2043.4	1985.0	1964.7	1891.4	1909.1	1864.3
19°	1786.9	1814.8	1821.6	1823.0	1771.3	1759.9	1696.8	1710.3	1673.7
20°	1618.0	1634.4	1636.3	1632.9	1583.4	1573.9	1517.7	1529.8	1498.0
21°	1422.6	1451.1	1445.1	1439.6	1388.1	1380.6	1333.1	1335.2	1304.0
22°	1204.8	1255.8	1249.0	1239.5	1169.7	1159.5	1147.2	1142.4	1112.7
23°	938.3	1057.0	1050.8	1037.4	935.6	966.2	958.6	949.8	922.0
24°	719.9	859.6	856.2	835.1	700.1	776.0	767.9	760.6	738.8
25°	516.4	670.3	671.0	638.5	478.3	614.6	586.1	580.7	561.1
26°	369.0	498.7	502.1	455.3	293.7	443.7	423.4	415.8	400.3
27°	224.5	347.4	354.1	298.6	183.1	297.8	285.0	276.8	232.0
28°	154.6	226.5	234.7	184.6	143.1	198.8	183.1	173.7	135.0
29°	132.3	147.9	154.0	130.2	120.7	132.3	124.8	120.7	109.3
30°	109.3	112.6	115.3	107.8	101.1	104.4	101.1	97.7	90.2
32.5°	69.2	75.3	77.4	71.9	65.7	67.8	67.8	63.1	57.0
35°	38.7	48.3	54.3	47.4	38.1	45.4	48.9	42.1	34.0
37.5°	23.8	29.8	38.1	29.8	23.0	29.1	35.3	26.4	21.7
40°	14.2	18.3	27.1	18.3	13.6	17.7	24.4	16.3	12.9
42.5°	8.1	10.8	17.7	10.8	7.5	10.2	16.3	9.6	7.5
45°	4.1	6.1	10.8	6.1	4.1	6.1	10.2	5.5	4.1
47.5°	2.1	3.4	6.1	3.4	2.1	3.4	5.5	3.4	2.1
50°	0.6	1.4	3.4	1.4	0.6	1.4	3.4	1.4	1.4
52.5°	0.6	0.6	2.1	0.6	0.6	0.6	1.4	0.6	0.6
55°	0.6	0.6	0.6	0.6	0.0	0.6	0.6	0.6	0.6
57.5°	0.6	0.0	0.6	0.0	0.0	0.0	0.6	0.6	0.6
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	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°

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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

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