

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: P208774

Luminaire Tested: **LDSQA6A30835D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208774
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: LDSQA6A30835D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2803.0 lumens
Efficiency: N/A
Efficacy: 62.8 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

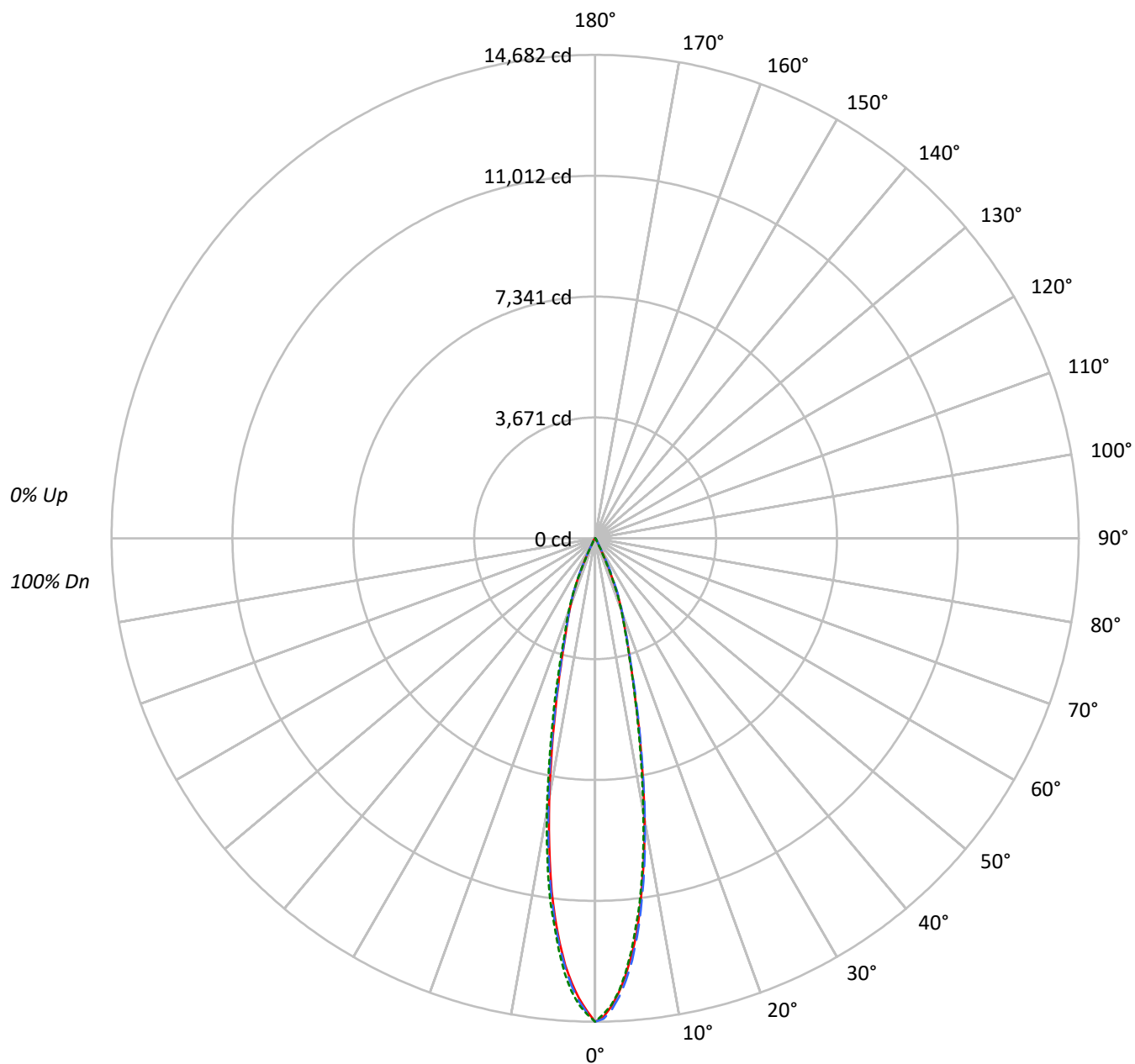
Input Watts (W): 44.62
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
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°	632148	632148	632148
5°	549371	543752	533937
10°	377420	368235	349785
15°	196542	194804	179426
20°	109287	106950	101177
25°	36157	33497	39293
30°	8004	7408	6612
35°	2996	2943	2628
40°	1180	1124	1068
45°	365	365	365
50°	67	67	134
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°	1072.4	38.3
10°-20°	1242.9	44.3
20°-30°	431.9	15.4
30°-40°	46.0	1.6
40°-50°	8.8	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°	2747.3	98.0
0°-40°	2793.3	99.7
0°-60°	2803.0	100.0
0°-90°	2803.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2803.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	14682	14682	14682	14682	14682	
5°	12711	12865	12581	12426	12354	1080
15°	4409	4505	4370	4116	4025	1269
25°	761	989	705	864	827	412
35°	57	80	56	72	50	43
45°	6	16	6	15	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°	14682.1	14682.1	14682.1	14682.1	14682.1	14682.1	14682.1	14682.1	14682.1
1°	14547.1	14545.1	14597.1	14611.1	14453.1	14669.1	14412.1	14675.1	14358.1
2°	14220.1	14238.1	14327.1	14315.1	14177.1	14367.1	14065.1	14272.1	13987.1
3°	13805.0	13837.1	13940.1	13932.1	13771.0	13934.1	13614.0	13799.0	13531.0
4°	13297.0	13372.0	13458.0	13481.0	13236.0	13383.0	13072.0	13245.0	12990.0
5°	12711.0	12810.0	12865.0	12834.0	12581.0	12716.0	12425.9	12672.0	12353.9
6°	12048.9	12125.9	12166.9	12111.9	11831.9	11984.9	11713.9	11922.9	11611.9
7°	11260.9	11347.9	11380.9	11326.9	11132.8	11194.9	10923.8	11098.8	10807.8
8°	10385.8	10516.8	10521.8	10472.8	10271.8	10203.8	10048.8	10176.8	9900.8
9°	9526.7	9624.7	9622.7	9586.7	9364.7	9265.7	9114.7	9205.7	8960.7
10°	8632.7	8720.7	8690.7	8657.7	8422.6	8312.6	8167.6	8215.6	8000.6
11°	7685.6	7797.6	7749.6	7717.6	7483.6	7375.6	7230.5	7243.6	7054.5
12°	6728.5	6887.5	6830.5	6809.5	6593.5	6488.5	6357.5	6343.5	6164.5
13°	5925.5	6023.5	5967.5	5956.5	5766.4	5675.4	5464.4	5520.4	5357.4
14°	5068.4	5239.4	5189.4	5184.4	5028.4	4943.4	4748.4	4792.4	4650.4
15°	4409.3	4545.3	4505.3	4503.3	4370.3	4289.3	4116.3	4152.3	4025.3
16°	3809.3	3937.3	3908.3	3913.3	3795.3	3724.3	3574.3	3604.3	3502.3
17°	3391.3	3437.3	3410.3	3410.3	3312.3	3268.2	3139.2	3168.2	3088.2
18°	2975.2	2992.2	3009.2	3012.2	2926.2	2896.2	2788.2	2814.2	2748.2
19°	2634.2	2675.2	2685.2	2687.2	2611.2	2594.2	2501.2	2521.2	2467.2
20°	2385.2	2409.2	2412.2	2407.2	2334.2	2320.2	2237.2	2255.2	2208.2
21°	2097.2	2139.2	2130.2	2122.2	2046.2	2035.2	1965.1	1968.1	1922.1
22°	1776.1	1851.1	1841.1	1827.1	1724.1	1709.1	1691.1	1684.1	1640.1
23°	1383.1	1558.1	1549.1	1529.1	1379.1	1424.1	1413.1	1400.1	1359.1
24°	1061.1	1267.1	1262.1	1231.1	1032.1	1144.1	1132.1	1121.1	1089.1
25°	761.1	988.1	989.1	941.1	705.1	906.1	864.1	856.1	827.1
26°	544.0	735.1	740.1	671.1	433.0	654.0	624.0	613.0	590.0
27°	331.0	512.0	522.0	440.0	270.0	439.0	420.0	408.0	342.0
28°	228.0	334.0	346.0	272.0	211.0	293.0	270.0	256.0	199.0
29°	195.0	218.0	227.0	192.0	178.0	195.0	184.0	178.0	161.0
30°	161.0	166.0	170.0	159.0	149.0	154.0	149.0	144.0	133.0
32.5°	102.0	111.0	114.0	106.0	97.0	100.0	100.0	93.0	84.0
35°	57.0	71.0	80.0	70.0	56.0	67.0	72.0	62.0	50.0
37.5°	35.0	44.0	56.0	44.0	34.0	43.0	52.0	39.0	32.0
40°	21.0	27.0	40.0	27.0	20.0	26.0	36.0	24.0	19.0
42.5°	12.0	16.0	26.0	16.0	11.0	15.0	24.0	14.0	11.0
45°	6.0	9.0	16.0	9.0	6.0	9.0	15.0	8.0	6.0
47.5°	3.0	5.0	9.0	5.0	3.0	5.0	8.0	5.0	3.0
50°	1.0	2.0	5.0	2.0	1.0	2.0	5.0	2.0	2.0
52.5°	1.0	1.0	3.0	1.0	1.0	1.0	2.0	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)