

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: P208799

Luminaire Tested: **LDSQA6A20840D010TE LAR35FL 6LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P208799  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29057)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA6A20840D010TE LAR35FL 6LSQA1H  
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 35° FLOOD  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2456.5 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 0.6 / 0.59 / 0.55  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

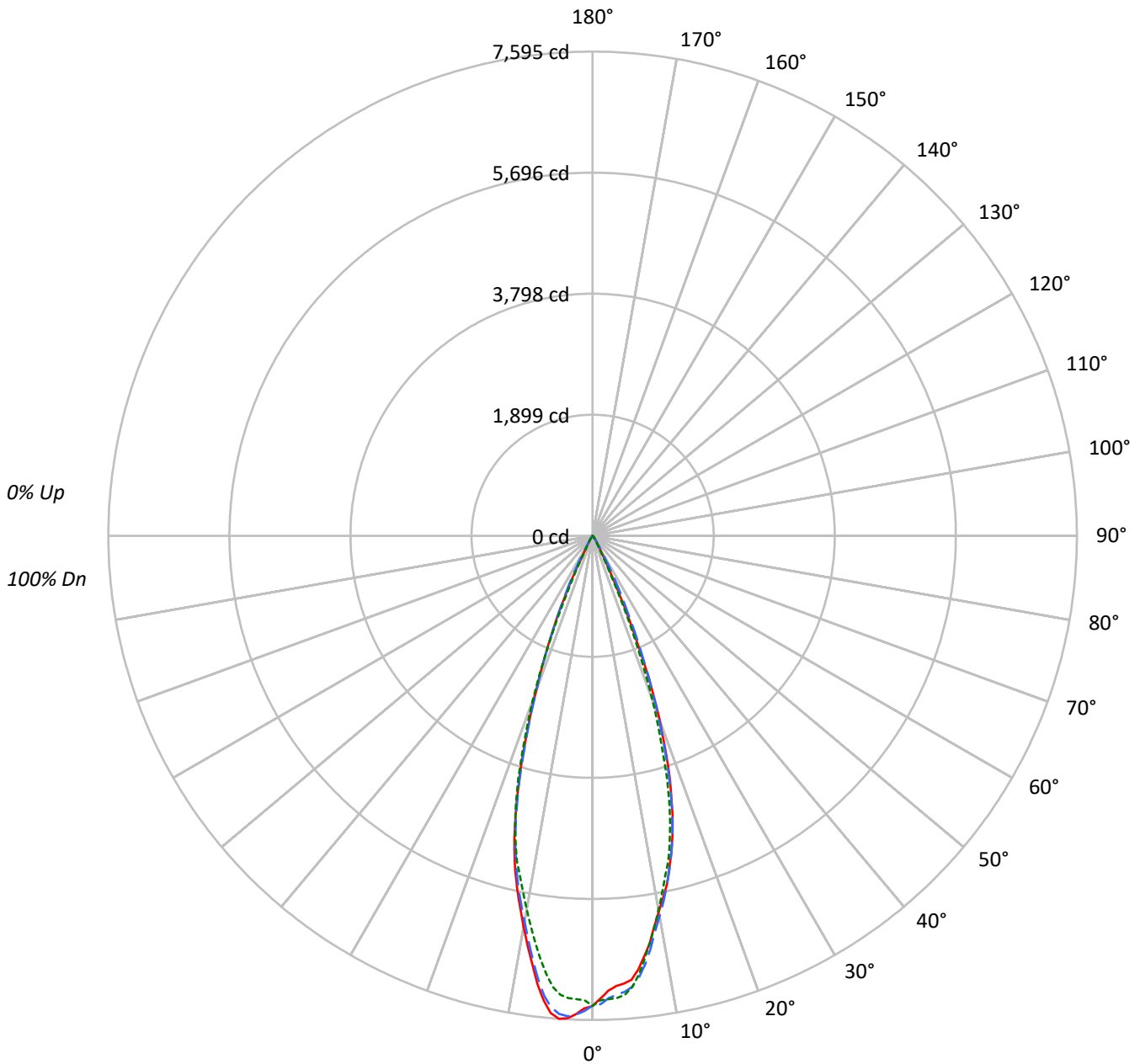
Input Watts (W): 28.81  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P208799

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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			0	
RW	70	50	30	10	70	50	30	10	50	30	10	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	102	102	102	100	100	100	100
1	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96	96	96	96
2	111	107	104	102	109	106	103	101	103	100	98	100	98	96	97	96	94	93	93	93	93
3	107	103	99	96	106	101	98	95	99	96	94	96	94	92	94	92	91	90	90	90	90
4	104	98	94	91	102	97	93	91	95	92	90	93	91	89	92	89	88	86	86	86	86
5	101	94	90	87	99	94	90	87	92	89	86	90	88	85	89	87	85	83	83	83	83
6	97	91	87	84	96	90	86	83	89	85	83	88	85	82	87	84	82	81	81	81	81
7	94	88	83	80	93	87	83	80	86	82	80	85	82	79	84	81	79	78	78	78	78
8	92	85	80	77	91	84	80	77	83	80	77	82	79	77	82	79	76	75	75	75	75
9	89	82	78	75	88	82	78	75	81	77	75	80	77	74	79	76	74	73	73	73	73
10	86	79	75	72	86	79	75	72	78	75	72	78	74	72	77	74	72	71	71	71	71

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	317553	317553	317553
5°	302087	307334	324855
10°	261729	260312	272405
15°	216124	209340	210213
20°	140568	125237	119367
25°	42243	32290	42998
30°	9217	6707	7119
35°	3285	2018	2218
40°	972	635	764
45°	274	183	231
50°	54	54	100
55°	60	0	113
60°	69	0	0
65°	82	0	0
70°	101	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



TEST NUMBER: P208799

CATALOG NUMBER: LDSQA6A20840D010TE LAR35FL 6LSQA1H

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	649.7	26.4
10°-20°	1261.1	51.3
20°-30°	498.3	20.3
30°-40°	41.0	1.7
40°-50°	5.6	0.2
50°-60°	0.7	0.0
60°-70°	0.2	0.0
70°-80°	0.1	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°	2409.0	98.1
0°-40°	2450.0	99.7
0°-60°	2456.3	100.0
0°-90°	2456.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2456.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	7375	7375	7375	7375	7375	
5°	6990	7101	7111	7430	7516	632
15°	4849	4836	4696	4658	4716	1296
25°	889	1202	680	996	905	500
35°	62	63	38	54	42	47
45°	4	11	3	8	4	5
55°	1	1	0	1	2	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



TEST NUMBER: P208799

CATALOG NUMBER: LDSQA6A20840D010TE LAR35FL 6LSQA1H

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4	7375.4
1°	7256.3	7173.4	7346.7	7340.0	7285.7	7438.7	7454.5	7553.2	7413.1
2°	7139.5	7073.9	7256.3	7275.2	7275.2	7465.8	7515.6	7639.1	7510.3
3°	7071.7	7017.4	7207.3	7257.1	7262.3	7474.9	7548.0	7686.6	7581.1
4°	7042.3	6992.6	7172.7	7211.1	7218.6	7443.2	7520.1	7678.3	7595.4
5°	6989.5	6933.8	7101.1	7107.1	7110.9	7340.7	7430.4	7587.1	7516.3
6°	6840.3	6810.9	6963.9	6930.8	6920.2	7165.9	7257.1	7403.3	7331.7
7°	6645.2	6625.6	6769.5	6719.0	6692.6	6921.7	7006.1	7144.8	7088.3
8°	6445.5	6398.0	6535.1	6491.4	6447.0	6644.4	6718.3	6846.4	6793.6
9°	6196.0	6171.9	6273.6	6259.3	6199.0	6401.7	6428.9	6554.0	6511.0
10°	5986.5	5957.1	6059.6	6032.5	5954.1	6131.2	6150.0	6269.9	6230.7
11°	5783.0	5744.6	5832.0	5797.4	5709.2	5868.2	5881.0	5992.5	5952.6
12°	5596.2	5533.6	5602.2	5560.7	5467.3	5607.5	5613.5	5718.2	5681.3
13°	5349.0	5307.5	5361.8	5317.3	5257.8	5336.9	5324.9	5424.3	5390.4
14°	5110.8	5058.8	5108.6	5055.1	4992.5	5045.3	5010.6	5097.3	5070.9
15°	4848.6	4796.6	4835.8	4770.2	4696.4	4716.0	4657.9	4738.6	4716.0
16°	4543.4	4491.4	4525.3	4445.4	4358.0	4346.7	4269.8	4340.7	4317.3
17°	4199.0	4161.3	4184.7	4084.5	3992.5	3953.3	3851.6	3914.1	3890.8
18°	3871.2	3797.3	3807.1	3695.6	3555.4	3531.3	3416.8	3476.3	3452.9
19°	3441.6	3407.0	3412.3	3286.4	3144.7	3100.3	2986.5	3039.2	3012.9
20°	3067.9	3015.1	3010.6	2874.2	2733.3	2686.5	2576.5	2630.8	2605.2
21°	2640.6	2673.0	2616.5	2472.5	2298.4	2303.0	2205.8	2211.0	2228.4
22°	2159.8	2278.1	2229.9	2059.6	1841.8	1942.0	1854.6	1860.6	1875.7
23°	1684.3	1807.1	1850.8	1644.3	1407.7	1607.4	1538.1	1542.6	1552.4
24°	1250.2	1423.5	1501.9	1265.3	1013.6	1293.2	1254.0	1259.2	1248.7
25°	889.2	1092.7	1202.0	934.5	679.7	1004.5	996.2	1004.5	905.1
26°	600.6	823.7	948.0	655.6	420.5	742.3	792.8	774.7	587.0
27°	384.3	626.2	728.7	428.8	266.8	510.9	591.6	586.3	336.9
28°	270.5	434.8	538.1	263.8	205.7	321.0	422.8	385.8	215.5
29°	228.3	282.6	375.3	187.6	167.3	189.9	283.3	225.3	176.3
30°	185.4	187.6	246.4	151.5	134.9	135.6	180.9	147.7	143.2
32.5°	113.0	112.3	106.3	88.9	79.1	79.1	88.2	85.2	84.4
35°	62.5	68.6	63.3	53.5	38.4	47.5	53.5	50.5	42.2
37.5°	33.9	39.9	43.7	29.4	21.1	27.9	36.2	29.4	24.1
40°	17.3	21.9	30.9	16.6	11.3	15.8	24.9	16.6	13.6
42.5°	9.0	12.1	19.6	9.0	5.3	9.0	15.8	9.0	6.8
45°	4.5	6.0	10.6	4.5	3.0	4.5	8.3	5.3	3.8
47.5°	2.3	3.0	5.3	2.3	0.8	2.3	4.5	2.3	2.3
50°	0.8	1.5	3.0	0.8	0.8	0.8	2.3	1.5	1.5
52.5°	0.8	0.8	1.5	0.8	0.0	0.8	1.5	0.8	1.5
55°	0.8	0.8	0.8	0.0	0.0	0.8	0.8	0.8	1.5
57.5°	0.8	0.8	0.8	0.0	0.0	0.0	0.8	0.8	1.5
60°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.8	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.8	0.8	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°	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)