

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: P208783

Luminaire Tested: **LDSQA6A10840D010TE LAR35FL 6LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P208783  
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: LDSQA6A10840D010TE 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: 1355.4 lumens  
Efficiency: N/A  
Efficacy: 98.7 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

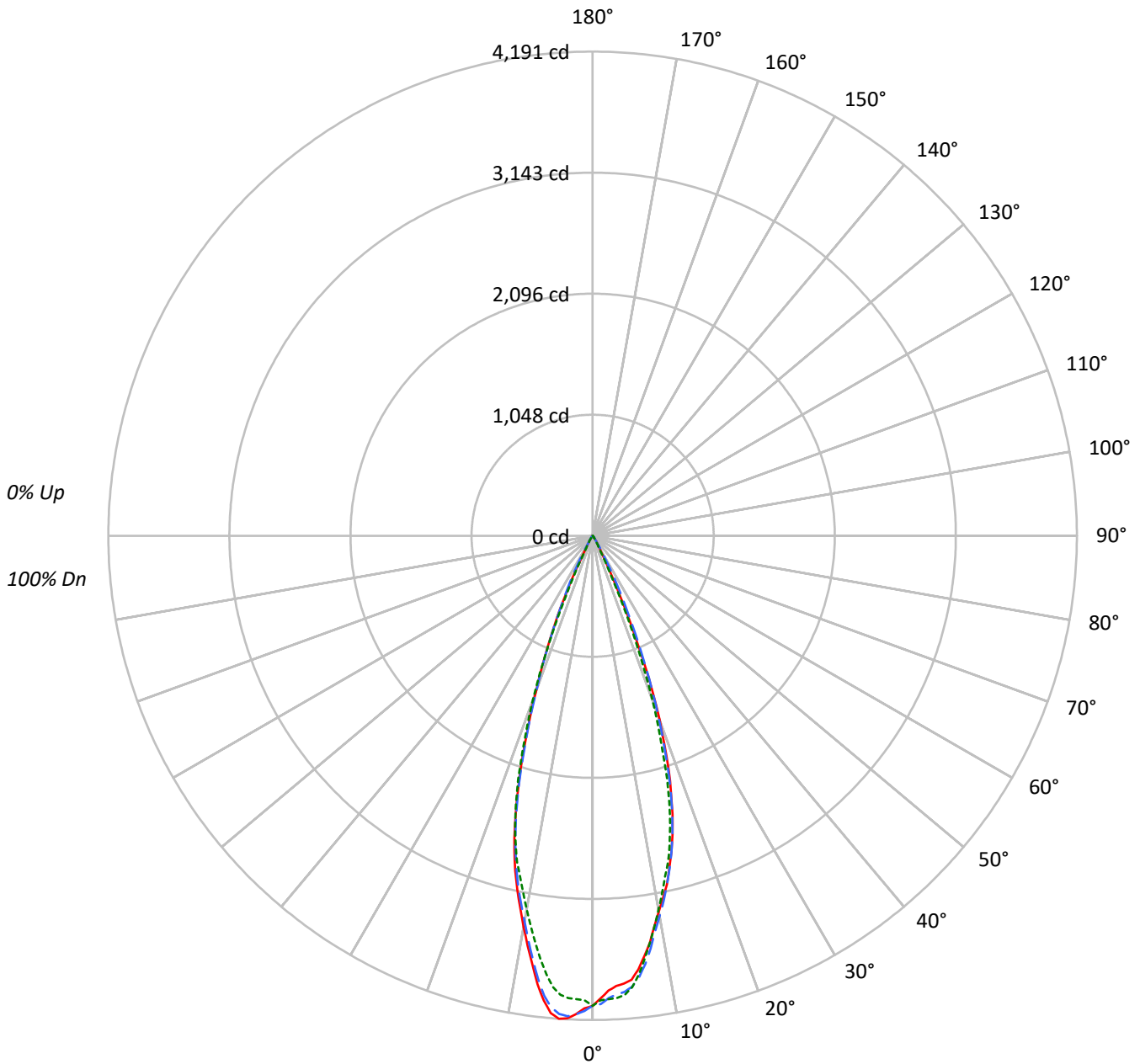
Input Watts (W): 13.73  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	94	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°	175224	175224	175224
5°	166691	169583	179251
10°	144420	143637	150309
15°	119255	115510	115992
20°	77562	69104	65865
25°	23312	17820	23725
30°	5086	3699	3928
35°	1813	1114	1225
40°	540	348	422
45°	152	104	128
50°	27	27	54
55°	30	0	60
60°	34	0	0
65°	41	0	0
70°	50	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°	358.5	26.4
10°-20°	695.8	51.3
20°-30°	274.9	20.3
30°-40°	22.6	1.7
40°-50°	3.1	0.2
50°-60°	0.3	0.0
60°-70°	0.1	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°	1329.3	98.1
0°-40°	1351.9	99.7
0°-60°	1355.3	100.0
0°-90°	1355.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1355.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	4070	4070	4070	4070	4070	
5°	3857	3918	3924	4100	4147	349
15°	2675	2668	2591	2570	2602	715
25°	491	663	375	550	499	276
35°	34	35	21	30	23	26
45°	2	6	2	5	2	3
55°	0	0	0	0	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	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	4069.7	4069.7	4069.7	4069.7	4069.7	4069.7	4069.7	4069.7	4069.7
1°	4004.0	3958.2	4053.9	4050.1	4020.2	4104.6	4113.3	4167.8	4090.5
2°	3939.5	3903.3	4004.0	4014.4	4014.4	4119.6	4147.0	4215.2	4144.1
3°	3902.1	3872.1	3976.9	4004.4	4007.3	4124.6	4164.9	4241.4	4183.2
4°	3885.9	3858.4	3957.8	3979.0	3983.2	4107.1	4149.5	4236.8	4191.1
5°	3856.8	3826.0	3918.3	3921.6	3923.7	4050.5	4100.0	4186.5	4147.4
6°	3774.4	3758.2	3842.6	3824.3	3818.5	3954.1	4004.4	4085.1	4045.5
7°	3666.7	3655.9	3735.3	3707.5	3692.9	3819.3	3865.9	3942.4	3911.2
8°	3556.5	3530.3	3606.0	3581.9	3557.4	3666.3	3707.1	3777.8	3748.6
9°	3418.9	3405.6	3461.7	3453.8	3420.6	3532.4	3547.4	3616.4	3592.7
10°	3303.3	3287.1	3343.6	3328.7	3285.4	3383.1	3393.5	3459.7	3438.0
11°	3191.0	3169.8	3218.1	3198.9	3150.3	3238.0	3245.1	3306.6	3284.6
12°	3087.9	3053.4	3091.2	3068.4	3016.8	3094.1	3097.5	3155.3	3134.9
13°	2951.5	2928.6	2958.6	2934.1	2901.2	2944.9	2938.2	2993.1	2974.4
14°	2820.1	2791.4	2818.9	2789.3	2754.8	2783.9	2764.8	2812.6	2798.1
15°	2675.4	2646.7	2668.3	2632.2	2591.4	2602.2	2570.2	2614.7	2602.2
16°	2507.0	2478.3	2497.0	2452.9	2404.7	2398.5	2356.1	2395.1	2382.3
17°	2317.0	2296.2	2309.1	2253.8	2203.0	2181.4	2125.3	2159.8	2146.9
18°	2136.1	2095.3	2100.7	2039.2	1961.9	1948.5	1885.3	1918.2	1905.3
19°	1899.1	1879.9	1882.8	1813.4	1735.2	1710.7	1647.9	1677.0	1662.5
20°	1692.8	1663.7	1661.2	1586.0	1508.2	1482.4	1421.7	1451.6	1437.5
21°	1457.0	1474.9	1443.7	1364.3	1268.3	1270.8	1217.1	1220.0	1229.6
22°	1191.8	1257.0	1230.4	1136.4	1016.3	1071.6	1023.3	1026.7	1035.0
23°	929.4	997.1	1021.3	907.3	776.8	887.0	848.7	851.2	856.6
24°	689.9	785.5	828.7	698.2	559.3	713.6	691.9	694.8	689.0
25°	490.7	602.9	663.2	515.6	375.1	554.3	549.7	554.3	499.4
26°	331.4	454.5	523.1	361.8	232.0	409.6	437.4	427.5	323.9
27°	212.1	345.5	402.1	236.6	147.2	281.9	326.4	323.5	185.9
28°	149.3	239.9	296.9	145.5	113.5	177.1	233.3	212.9	118.9
29°	126.0	155.9	207.1	103.5	92.3	104.8	156.3	124.3	97.3
30°	102.3	103.5	136.0	83.6	74.4	74.8	99.8	81.5	79.0
32.5°	62.4	62.0	58.6	49.1	43.7	43.7	48.7	47.0	46.6
35°	34.5	37.8	34.9	29.5	21.2	26.2	29.5	27.9	23.3
37.5°	18.7	22.0	24.1	16.2	11.6	15.4	20.0	16.2	13.3
40°	9.6	12.1	17.0	9.1	6.2	8.7	13.7	9.1	7.5
42.5°	5.0	6.7	10.8	5.0	2.9	5.0	8.7	5.0	3.7
45°	2.5	3.3	5.8	2.5	1.7	2.5	4.6	2.9	2.1
47.5°	1.2	1.7	2.9	1.2	0.4	1.2	2.5	1.2	1.2
50°	0.4	0.8	1.7	0.4	0.4	0.4	1.2	0.8	0.8
52.5°	0.4	0.4	0.8	0.4	0.0	0.4	0.8	0.4	0.8
55°	0.4	0.4	0.4	0.0	0.0	0.4	0.4	0.4	0.8
57.5°	0.4	0.4	0.4	0.0	0.0	0.0	0.4	0.4	0.8
60°	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.4	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.4	0.4	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°	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)