

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: P208748

Luminaire Tested: **LDSQA6A10827D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208748
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: LDSQA6A10827D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1077.0 lumens
Efficiency: N/A
Efficacy: 78.4 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

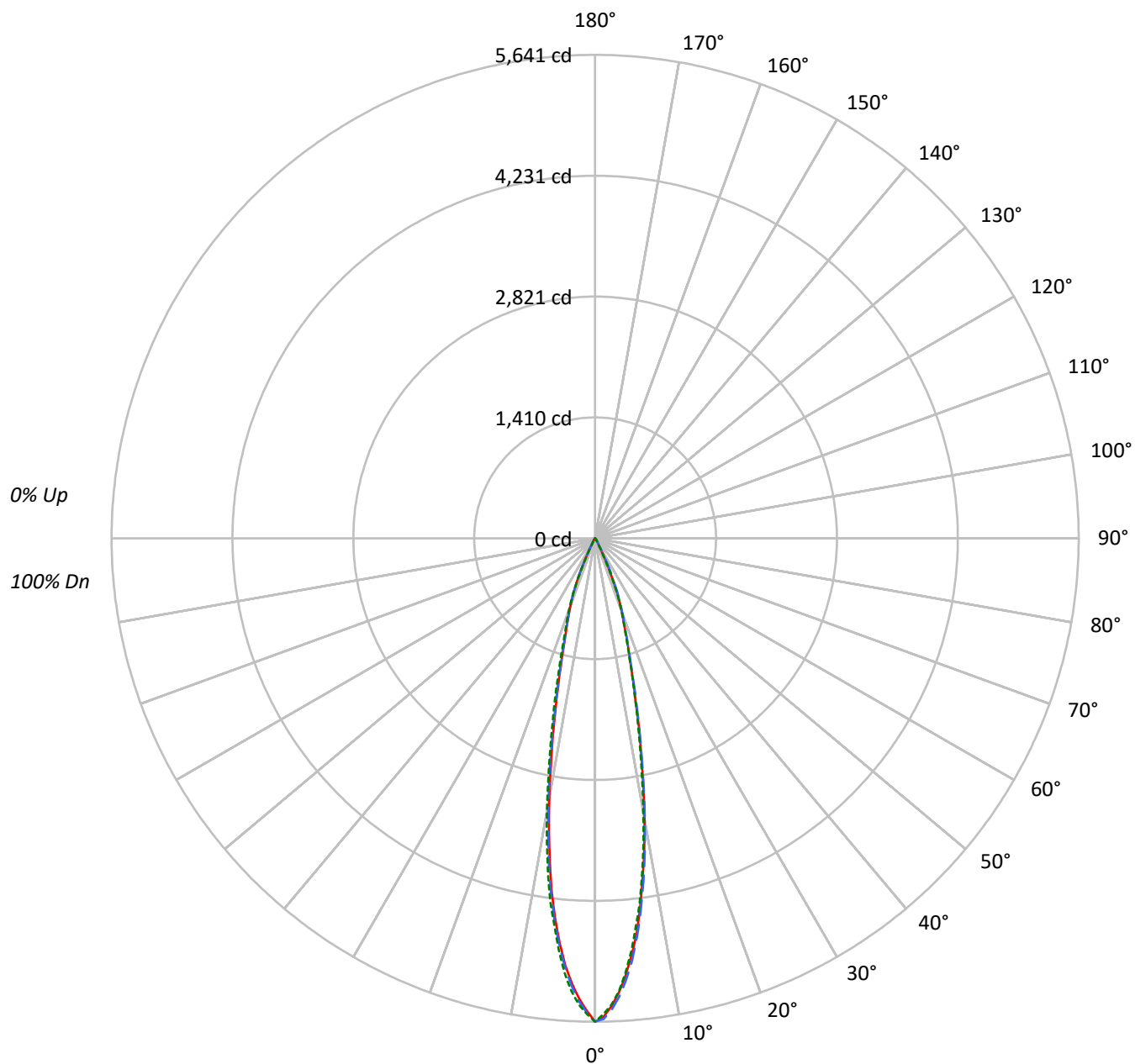
Input Watts (W): 13.73
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	115	113	111	110	113	111	109	108		107	106	105		103	102	102		100	99	99
2	112	108	105	103	110	107	104	102		103	101	100		101	99	97		98	97	95
3	108	104	100	98	107	103	99	97		100	98	95		98	96	94		96	94	93
4	105	100	96	93	104	99	96	93		97	94	92		95	93	91		94	92	90
5	102	97	93	90	101	96	92	89		94	91	89		93	90	88		91	89	87
6	99	94	90	87	98	93	89	86		92	88	86		90	88	85		89	87	85
7	97	91	87	84	96	90	86	84		89	86	83		88	85	83		87	85	83
8	94	88	84	82	93	88	84	81		87	83	81		86	83	81		85	82	80
9	92	86	82	79	91	85	82	79		85	81	79		84	81	79		83	80	78
10	90	84	80	77	89	83	80	77		83	79	77		82	79	77		81	79	77

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	242890	242890	242890
5°	211083	208926	205157
10°	145014	141486	134399
15°	75518	74849	68939
20°	41993	41095	38873
25°	13891	12870	15098
30°	3077	2849	2541
35°	1151	1130	1009
40°	455	433	410
45°	140	140	140
50°	27	27	54
55°	30	0	30
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°	412.0	38.3
10°-20°	477.6	44.3
20°-30°	166.0	15.4
30°-40°	17.7	1.6
40°-50°	3.4	0.3
50°-60°	0.4	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°	1055.6	98.0
0°-40°	1073.3	99.7
0°-60°	1077.0	100.0
0°-90°	1077.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1077.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5641	5641	5641	5641	5641	
5°	4884	4943	4834	4774	4747	415
15°	1694	1731	1679	1582	1547	487
25°	292	380	271	332	318	158
35°	22	31	22	28	19	17
45°	2	6	2	6	2	2
55°	0	0	0	0	0	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°	5641.3	5641.3	5641.3	5641.3	5641.3	5641.3	5641.3	5641.3	5641.3
1°	5589.5	5588.7	5608.7	5614.0	5553.3	5636.3	5537.6	5638.6	5516.8
2°	5463.8	5470.7	5504.9	5500.3	5447.3	5520.3	5404.2	5483.8	5374.3
3°	5304.3	5316.6	5356.2	5353.1	5291.3	5353.9	5230.9	5302.0	5199.0
4°	5109.1	5137.9	5171.0	5179.8	5085.7	5142.2	5022.7	5089.1	4991.2
5°	4883.9	4922.0	4943.1	4931.2	4834.0	4885.9	4774.4	4869.0	4746.8
6°	4629.6	4659.2	4674.9	4653.8	4546.2	4605.0	4500.8	4581.2	4461.6
7°	4326.8	4360.2	4372.9	4352.1	4277.6	4301.4	4197.3	4264.5	4152.7
8°	3990.5	4040.9	4042.8	4024.0	3946.7	3920.6	3861.0	3910.2	3804.2
9°	3660.5	3698.1	3697.4	3683.5	3598.2	3560.2	3502.1	3537.1	3443.0
10°	3316.9	3350.8	3339.2	3326.5	3236.2	3194.0	3138.3	3156.7	3074.1
11°	2953.0	2996.1	2977.6	2965.3	2875.4	2833.9	2778.2	2783.2	2710.6
12°	2585.3	2646.4	2624.5	2616.4	2533.4	2493.1	2442.7	2437.4	2368.6
13°	2276.7	2314.4	2292.9	2288.7	2215.6	2180.7	2099.6	2121.1	2058.5
14°	1947.4	2013.1	1993.9	1992.0	1932.1	1899.4	1824.5	1841.4	1786.8
15°	1694.2	1746.5	1731.1	1730.3	1679.2	1648.1	1581.6	1595.4	1546.6
16°	1463.6	1512.8	1501.7	1503.6	1458.3	1431.0	1373.3	1384.9	1345.7
17°	1303.0	1320.7	1310.3	1310.3	1272.7	1255.8	1206.2	1217.3	1186.6
18°	1143.2	1149.7	1156.2	1157.4	1124.3	1112.8	1071.3	1081.3	1055.9
19°	1012.1	1027.9	1031.7	1032.5	1003.3	996.8	961.0	968.7	948.0
20°	916.5	925.7	926.8	924.9	896.9	891.5	859.6	866.5	848.4
21°	805.8	821.9	818.5	815.4	786.2	782.0	755.1	756.2	738.5
22°	682.4	711.3	707.4	702.0	662.5	656.7	649.8	647.1	630.2
23°	531.4	598.7	595.2	587.5	529.9	547.2	543.0	538.0	522.2
24°	407.7	486.9	484.9	473.0	396.6	439.6	435.0	430.8	418.5
25°	292.4	379.6	380.0	361.6	270.9	348.1	332.0	328.9	317.8
26°	209.0	282.4	284.4	257.8	166.4	251.3	239.8	235.6	226.7
27°	127.2	196.7	200.6	169.1	103.8	168.7	161.4	156.8	131.4
28°	87.6	128.3	133.0	104.5	81.1	112.6	103.8	98.4	76.5
29°	74.9	83.8	87.2	73.8	68.4	74.9	70.7	68.4	61.9
30°	61.9	63.8	65.3	61.1	57.3	59.2	57.3	55.3	51.1
32.5°	39.2	42.7	43.8	40.7	37.3	38.4	38.4	35.7	32.3
35°	21.9	27.3	30.7	26.9	21.5	25.7	27.7	23.8	19.2
37.5°	13.4	16.9	21.5	16.9	13.1	16.5	20.0	15.0	12.3
40°	8.1	10.4	15.4	10.4	7.7	10.0	13.8	9.2	7.3
42.5°	4.6	6.1	10.0	6.1	4.2	5.8	9.2	5.4	4.2
45°	2.3	3.5	6.1	3.5	2.3	3.5	5.8	3.1	2.3
47.5°	1.2	1.9	3.5	1.9	1.2	1.9	3.1	1.9	1.2
50°	0.4	0.8	1.9	0.8	0.4	0.8	1.9	0.8	0.8
52.5°	0.4	0.4	1.2	0.4	0.4	0.4	0.8	0.4	0.4
55°	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4
57.5°	0.4	0.0	0.4	0.0	0.0	0.0	0.4	0.4	0.4
60°	0.0	0.0	0.0	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°	0.0	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



Report Generated By E9808895 / USPTCWHP6082093





— 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)