

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: P208762

Luminaire Tested: **LDSQA6A15935D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208762
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: LDSQA6A15935D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1357.1 lumens
Efficiency: N/A
Efficacy: 62.3 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

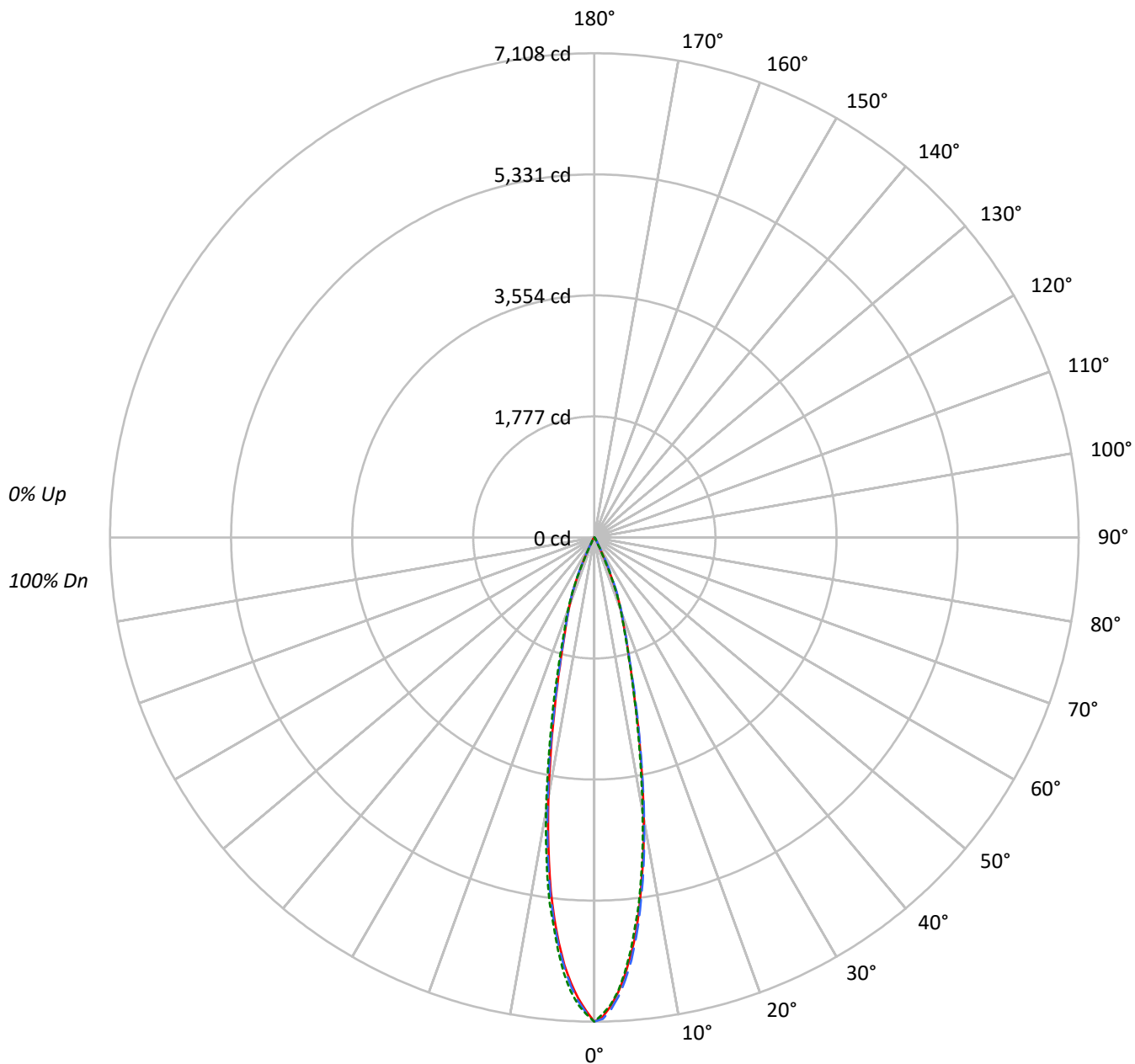
Input Watts (W): 21.79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	306048	306048	306048
5°	265972	263254	258504
10°	182723	178281	169345
15°	95153	94315	86867
20°	52912	51780	48985
25°	17506	16214	19022
30°	3878	3585	3202
35°	1451	1424	1272
40°	573	545	517
45°	177	177	177
50°	33	33	67
55°	38	0	38
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°	519.2	38.3
10°-20°	601.8	44.3
20°-30°	209.1	15.4
30°-40°	22.3	1.6
40°-50°	4.3	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°	1330.1	98.0
0°-40°	1352.3	99.7
0°-60°	1357.1	100.0
0°-90°	1357.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1357.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7108	7108	7108	7108	7108	
5°	6154	6228	6091	6016	5981	523
15°	2135	2181	2116	1993	1949	614
25°	368	479	341	418	400	200
35°	28	39	27	35	24	21
45°	3	8	3	7	3	3
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	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	7108.2	7108.2	7108.2	7108.2	7108.2	7108.2	7108.2	7108.2	7108.2
1°	7042.9	7041.9	7067.1	7073.8	6997.3	7101.9	6977.5	7104.8	6951.3
2°	6884.5	6893.2	6936.3	6930.5	6863.7	6955.7	6809.5	6909.7	6771.7
3°	6683.6	6699.1	6749.0	6745.1	6667.1	6746.1	6591.1	6680.7	6550.9
4°	6437.6	6473.9	6515.6	6526.7	6408.1	6479.3	6328.7	6412.5	6289.0
5°	6153.9	6201.8	6228.5	6213.5	6091.0	6156.3	6015.9	6135.0	5981.1
6°	5833.4	5870.7	5890.5	5863.9	5728.3	5802.4	5671.2	5772.4	5621.8
7°	5451.8	5494.0	5510.0	5483.8	5389.9	5419.9	5288.7	5373.4	5232.5
8°	5028.2	5091.6	5094.0	5070.3	4973.0	4940.1	4865.0	4927.0	4793.4
9°	4612.3	4659.7	4658.8	4641.3	4533.8	4485.9	4412.8	4456.9	4338.2
10°	4179.4	4222.0	4207.5	4191.5	4077.8	4024.5	3954.3	3977.5	3873.4
11°	3720.9	3775.1	3751.9	3736.4	3623.1	3570.8	3500.6	3506.9	3415.4
12°	3257.6	3334.5	3306.9	3296.8	3192.2	3141.3	3077.9	3071.1	2984.5
13°	2868.8	2916.2	2889.1	2883.8	2791.8	2747.7	2645.6	2672.7	2593.7
14°	2453.8	2536.6	2512.4	2510.0	2434.4	2393.3	2298.9	2320.2	2251.4
15°	2134.7	2200.6	2181.2	2180.3	2115.9	2076.6	1992.9	2010.3	1948.8
16°	1844.2	1906.2	1892.2	1894.6	1837.5	1803.1	1730.5	1745.0	1695.6
17°	1641.8	1664.1	1651.0	1651.0	1603.6	1582.3	1519.8	1533.9	1495.1
18°	1440.4	1448.7	1456.9	1458.3	1416.7	1402.2	1349.9	1362.5	1330.5
19°	1275.3	1295.2	1300.0	1301.0	1264.2	1256.0	1210.9	1220.6	1194.5
20°	1154.8	1166.4	1167.8	1165.4	1130.1	1123.3	1083.1	1091.8	1069.1
21°	1015.3	1035.7	1031.3	1027.4	990.6	985.3	951.4	952.9	930.6
22°	859.9	896.2	891.4	884.6	834.7	827.5	818.7	815.4	794.1
23°	669.6	754.3	750.0	740.3	667.7	689.5	684.1	677.8	658.0
24°	513.7	613.5	611.0	596.0	499.7	553.9	548.1	542.8	527.3
25°	368.5	478.4	478.9	455.6	341.3	438.7	418.3	414.5	400.4
26°	263.4	355.9	358.3	324.9	209.6	316.7	302.1	296.8	285.7
27°	160.3	247.9	252.7	213.0	130.7	212.6	203.4	197.5	165.6
28°	110.4	161.7	167.5	131.7	102.2	141.9	130.7	123.9	96.4
29°	94.4	105.6	109.9	93.0	86.2	94.4	89.1	86.2	78.0
30°	78.0	80.4	82.3	77.0	72.1	74.6	72.1	69.7	64.4
32.5°	49.4	53.7	55.2	51.3	47.0	48.4	48.4	45.0	40.7
35°	27.6	34.4	38.7	33.9	27.1	32.4	34.9	30.0	24.2
37.5°	16.9	21.3	27.1	21.3	16.5	20.8	25.2	18.9	15.5
40°	10.2	13.1	19.4	13.1	9.7	12.6	17.4	11.6	9.2
42.5°	5.8	7.7	12.6	7.7	5.3	7.3	11.6	6.8	5.3
45°	2.9	4.4	7.7	4.4	2.9	4.4	7.3	3.9	2.9
47.5°	1.5	2.4	4.4	2.4	1.5	2.4	3.9	2.4	1.5
50°	0.5	1.0	2.4	1.0	0.5	1.0	2.4	1.0	1.0
52.5°	0.5	0.5	1.5	0.5	0.5	0.5	1.0	0.5	0.5
55°	0.5	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.5
57.5°	0.5	0.0	0.5	0.0	0.0	0.0	0.5	0.5	0.5
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	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)