

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: P208753

Luminaire Tested: **LDSQA6A10930D010TE LARL20NF 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208753
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: LDSQA6A10930D010TE LARL20NF 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 20° NARROW FLOOD
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 898.5 lumens
Efficiency: N/A
Efficacy: 65.4 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

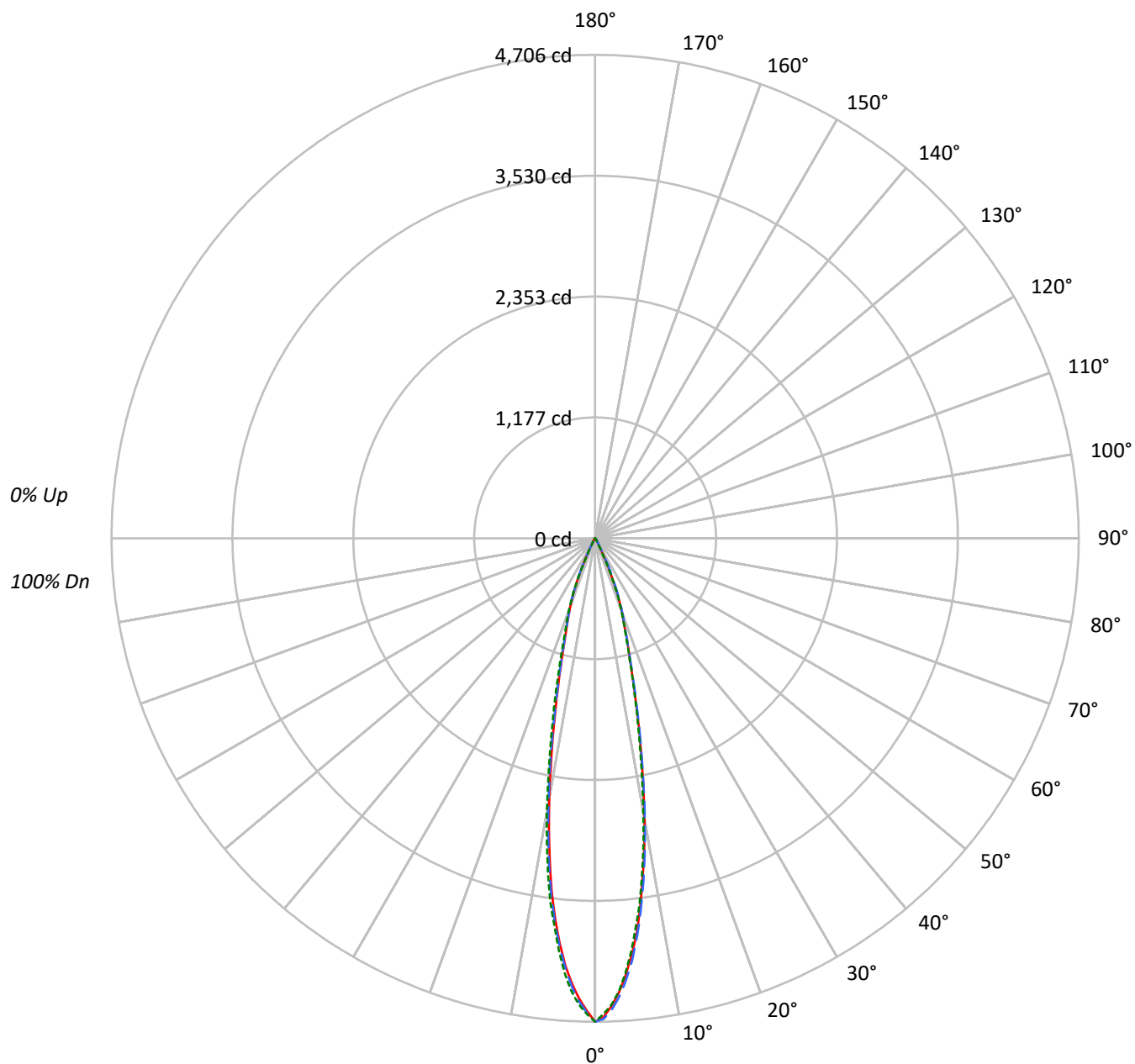
Input Watts (W): 13.73
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	202641	202641	202641
5°	176105	174307	171160
10°	120986	118044	112128
15°	63006	62449	57519
20°	35033	34282	32435
25°	11592	10737	12594
30°	2565	2376	2118
35°	962	946	841
40°	377	360	343
45°	116	116	116
50°	20	20	40
55°	23	0	23
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°	343.8	38.3
10°-20°	398.4	44.3
20°-30°	138.5	15.4
30°-40°	14.8	1.6
40°-50°	2.8	0.3
50°-60°	0.3	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°	880.7	98.0
0°-40°	895.4	99.7
0°-60°	898.5	100.0
0°-90°	898.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	898.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4706	4706	4706	4706	4706	
5°	4075	4124	4033	3983	3960	346
15°	1414	1444	1401	1320	1290	407
25°	244	317	226	277	265	132
35°	18	26	18	23	16	14
45°	2	5	2	5	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°	4706.5	4706.5	4706.5	4706.5	4706.5	4706.5	4706.5	4706.5	4706.5
1°	4663.2	4662.6	4679.3	4683.7	4633.1	4702.3	4619.9	4704.3	4602.6
2°	4558.4	4564.2	4592.7	4588.8	4544.6	4605.5	4508.7	4575.1	4483.7
3°	4425.3	4435.6	4468.6	4466.1	4414.4	4466.7	4364.1	4423.4	4337.5
4°	4262.5	4286.5	4314.1	4321.5	4242.9	4290.1	4190.4	4245.8	4164.1
5°	4074.6	4106.4	4124.0	4114.1	4033.0	4076.2	3983.3	4062.1	3960.2
6°	3862.4	3887.1	3900.2	3882.6	3792.8	3841.9	3755.0	3822.0	3722.3
7°	3609.8	3637.7	3648.3	3630.9	3568.7	3588.6	3501.7	3557.8	3464.6
8°	3329.3	3371.3	3372.9	3357.2	3292.7	3270.9	3221.2	3262.3	3173.8
9°	3053.9	3085.3	3084.7	3073.1	3002.0	2970.2	2921.8	2951.0	2872.4
10°	2767.3	2795.5	2785.9	2775.3	2700.0	2664.7	2618.2	2633.6	2564.7
11°	2463.7	2499.6	2484.2	2474.0	2398.9	2364.3	2317.8	2322.0	2261.4
12°	2156.9	2207.9	2189.6	2182.9	2113.6	2080.0	2038.0	2033.5	1976.1
13°	1899.5	1930.9	1912.9	1909.4	1848.5	1819.3	1751.7	1769.6	1717.4
14°	1624.7	1679.5	1663.5	1661.9	1611.9	1584.6	1522.1	1536.2	1490.7
15°	1413.5	1457.1	1444.2	1443.6	1401.0	1375.0	1319.5	1331.1	1290.4
16°	1221.1	1262.1	1252.8	1254.4	1216.6	1193.9	1145.8	1155.4	1122.7
17°	1087.1	1101.8	1093.2	1093.2	1061.8	1047.7	1006.3	1015.6	990.0
18°	953.7	959.2	964.6	965.6	938.0	928.4	893.8	902.1	881.0
19°	844.4	857.6	860.8	861.4	837.0	831.6	801.8	808.2	790.9
20°	764.6	772.3	773.2	771.6	748.2	743.8	717.1	722.9	707.9
21°	672.3	685.7	682.8	680.3	655.9	652.4	629.9	630.9	616.2
22°	569.4	593.4	590.2	585.7	552.7	547.9	542.1	539.9	525.8
23°	443.4	499.5	496.6	490.2	442.1	456.5	453.0	448.8	435.7
24°	340.1	406.2	404.6	394.6	330.8	366.7	362.9	359.4	349.1
25°	244.0	316.7	317.1	301.7	226.0	290.4	277.0	274.4	265.1
26°	174.4	235.6	237.2	215.1	138.8	209.7	200.0	196.5	189.1
27°	106.1	164.1	167.3	141.1	86.6	140.7	134.6	130.8	109.6
28°	73.1	107.1	110.9	87.2	67.6	93.9	86.6	82.1	63.8
29°	62.5	69.9	72.8	61.6	57.1	62.5	59.0	57.1	51.6
30°	51.6	53.2	54.5	51.0	47.8	49.4	47.8	46.2	42.6
32.5°	32.7	35.6	36.5	34.0	31.1	32.1	32.1	29.8	26.9
35°	18.3	22.8	25.6	22.4	18.0	21.5	23.1	19.9	16.0
37.5°	11.2	14.1	18.0	14.1	10.9	13.8	16.7	12.5	10.3
40°	6.7	8.7	12.8	8.7	6.4	8.3	11.5	7.7	6.1
42.5°	3.8	5.1	8.3	5.1	3.5	4.8	7.7	4.5	3.5
45°	1.9	2.9	5.1	2.9	1.9	2.9	4.8	2.6	1.9
47.5°	1.0	1.6	2.9	1.6	1.0	1.6	2.6	1.6	1.0
50°	0.3	0.6	1.6	0.6	0.3	0.6	1.6	0.6	0.6
52.5°	0.3	0.3	1.0	0.3	0.3	0.3	0.6	0.3	0.3
55°	0.3	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.3
57.5°	0.3	0.0	0.3	0.0	0.0	0.0	0.3	0.3	0.3
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	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)