

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: P208721

Luminaire Tested: **LDSQA6A10930D010TE LARL15SP 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208721
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29053)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQA6A10930D010TE LARL15SP 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 15° SPOT
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 773.2 lumens
Efficiency: N/A
Efficacy: 56.3 lumens/watt
Spacing Criteria (0/90/45): 0.31 / 0.31 / 0.36
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

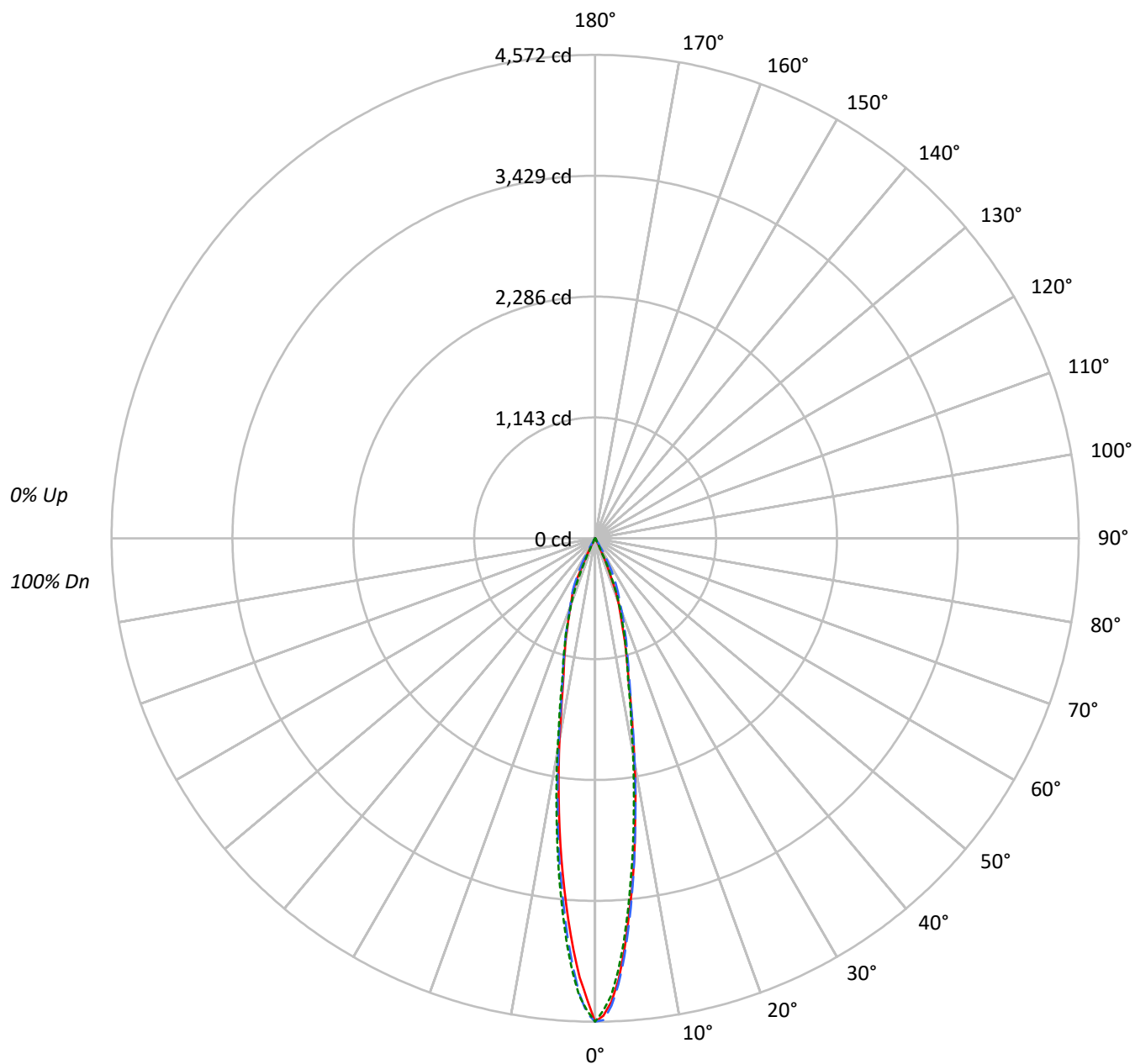
Input Watts (W): 13.73
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101		100
2	112	108	105	103	109	106	104	102	103	101	99		100	99	97		98
3	108	104	100	97	106	102	99	97	100	97	95		98	95	94		96
4	105	100	96	93	103	99	95	93	97	94	91		95	92	90		93
5	102	96	92	89	101	95	92	89	94	91	88		92	90	88		91
6	99	93	89	86	98	92	89	86	91	88	85		90	87	85		89
7	97	90	86	83	95	90	86	83	89	85	83		88	85	82		87
8	94	88	84	81	93	87	83	81	86	83	80		85	82	80		85
9	92	85	81	79	91	85	81	79	84	81	78		83	80	78		83
10	89	83	79	77	89	83	79	76	82	79	76		81	78	76		81

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	196846	196846	196846
5°	156487	153146	144070
10°	93233	89801	84489
15°	50944	51029	49429
20°	29187	29993	30832
25°	7706	8010	14395
30°	1054	974	940
35°	420	405	389
40°	163	163	163
45°	79	61	79
50°	40	20	67
55°	23	0	45
60°	26	0	0
65°	31	0	0
70°	38	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°	290.3	37.6
10°-20°	326.7	42.3
20°-30°	145.5	18.8
30°-40°	8.9	1.1
40°-50°	1.4	0.2
50°-60°	0.2	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°	762.5	98.6
0°-40°	771.4	99.8
0°-60°	773.1	100.0
0°-90°	773.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	773.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4572	4572	4572	4572	4572	
5°	3621	3663	3543	3460	3333	298
15°	1143	1193	1145	1137	1109	322
25°	162	433	169	419	303	96
35°	8	13	8	13	7	6
45°	1	2	1	2	1	1
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	4571.9	4571.9	4571.9	4571.9	4571.9	4571.9	4571.9	4571.9	4571.9
1°	4515.8	4557.1	4557.1	4547.2	4464.8	4526.0	4491.4	4454.2	4357.4
2°	4385.9	4427.9	4423.7	4385.9	4326.3	4351.6	4304.2	4258.0	4156.4
3°	4185.5	4230.8	4222.4	4183.0	4103.5	4118.9	4050.9	4016.0	3899.3
4°	3916.3	3973.6	3963.7	3920.1	3840.3	3839.3	3768.1	3731.3	3623.2
5°	3620.7	3680.6	3663.0	3627.1	3543.4	3528.4	3460.4	3434.1	3333.4
6°	3336.6	3374.1	3355.9	3326.1	3235.7	3226.4	3161.9	3139.5	3046.5
7°	3034.0	3060.0	3042.0	3018.9	2927.6	2915.4	2862.8	2845.2	2754.5
8°	2715.0	2752.2	2726.6	2712.1	2625.9	2609.2	2556.3	2544.5	2471.7
9°	2442.5	2455.0	2427.8	2384.5	2334.5	2317.5	2261.4	2249.9	2198.9
10°	2132.5	2171.3	2150.2	2113.0	2054.0	2066.8	1985.4	1975.8	1932.5
11°	1862.9	1903.6	1881.2	1847.8	1794.6	1802.0	1735.3	1694.9	1688.2
12°	1640.4	1659.0	1652.3	1625.4	1582.4	1584.6	1525.3	1493.0	1486.2
13°	1423.7	1457.1	1460.3	1438.1	1386.5	1410.3	1366.0	1339.7	1329.1
14°	1276.9	1302.2	1312.5	1311.8	1256.0	1276.9	1241.9	1220.8	1210.2
15°	1142.9	1175.9	1192.6	1191.6	1144.8	1166.0	1136.8	1120.1	1108.9
16°	1017.2	1062.4	1089.7	1085.2	1041.6	1063.4	1034.5	1018.2	1005.7
17°	890.9	953.1	993.2	984.5	939.0	966.6	939.0	924.9	911.7
18°	793.8	844.7	901.2	882.6	831.9	874.9	851.2	839.9	827.7
19°	706.6	741.5	814.9	781.9	736.1	784.8	767.2	758.2	746.6
20°	637.0	667.1	732.5	693.4	654.6	694.4	689.6	682.5	672.9
21°	547.9	605.3	657.8	621.6	570.6	626.7	632.8	629.0	621.9
22°	433.8	537.0	603.7	537.6	470.9	577.4	589.9	587.0	581.9
23°	337.6	456.5	553.6	460.4	366.7	522.6	541.1	539.2	522.2
24°	246.2	373.8	490.8	369.6	263.8	447.9	483.4	480.2	418.7
25°	162.2	291.1	433.4	277.3	168.6	362.3	418.7	413.2	303.0
26°	104.2	212.9	381.8	189.5	89.8	270.6	350.1	334.7	187.9
27°	50.0	148.4	318.7	111.6	43.6	180.5	280.8	246.5	90.7
28°	31.4	77.9	253.3	55.5	29.5	100.3	215.1	156.4	35.6
29°	25.6	38.5	187.5	31.4	24.0	46.2	154.2	76.3	24.7
30°	21.2	25.6	127.9	24.0	19.6	25.6	101.3	29.8	18.9
32.5°	13.5	16.0	29.5	15.1	12.8	14.7	24.0	14.4	11.9
35°	8.0	10.3	12.8	9.9	7.7	9.6	13.1	9.3	7.4
37.5°	4.8	6.1	8.3	6.1	4.8	6.1	8.3	6.1	4.5
40°	2.9	3.8	5.8	3.8	2.9	3.8	5.8	3.8	2.9
42.5°	1.9	2.2	3.8	2.2	1.6	2.2	3.8	2.6	1.9
45°	1.3	1.6	2.2	1.3	1.0	1.3	2.2	1.6	1.3
47.5°	1.0	1.0	1.3	0.6	0.6	1.0	1.6	1.3	1.0
50°	0.6	0.6	1.0	0.3	0.3	0.3	1.0	1.0	1.0
52.5°	0.3	0.3	0.3	0.0	0.0	0.0	0.6	0.6	0.6
55°	0.3	0.3	0.3	0.0	0.0	0.0	0.3	0.6	0.6
57.5°	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.6	0.6
60°	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.6	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.3	0.3	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°	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)