

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: P208738

Luminaire Tested: **LDSQA6A20935D010TE LARL15SP 6LSQA1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P208738
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: LDSQA6A20935D010TE LARL15SP 6LSQA1H
Description: PORTFOLIO 6" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 15° SPOT
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1414.7 lumens
Efficiency: N/A
Efficacy: 49.1 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

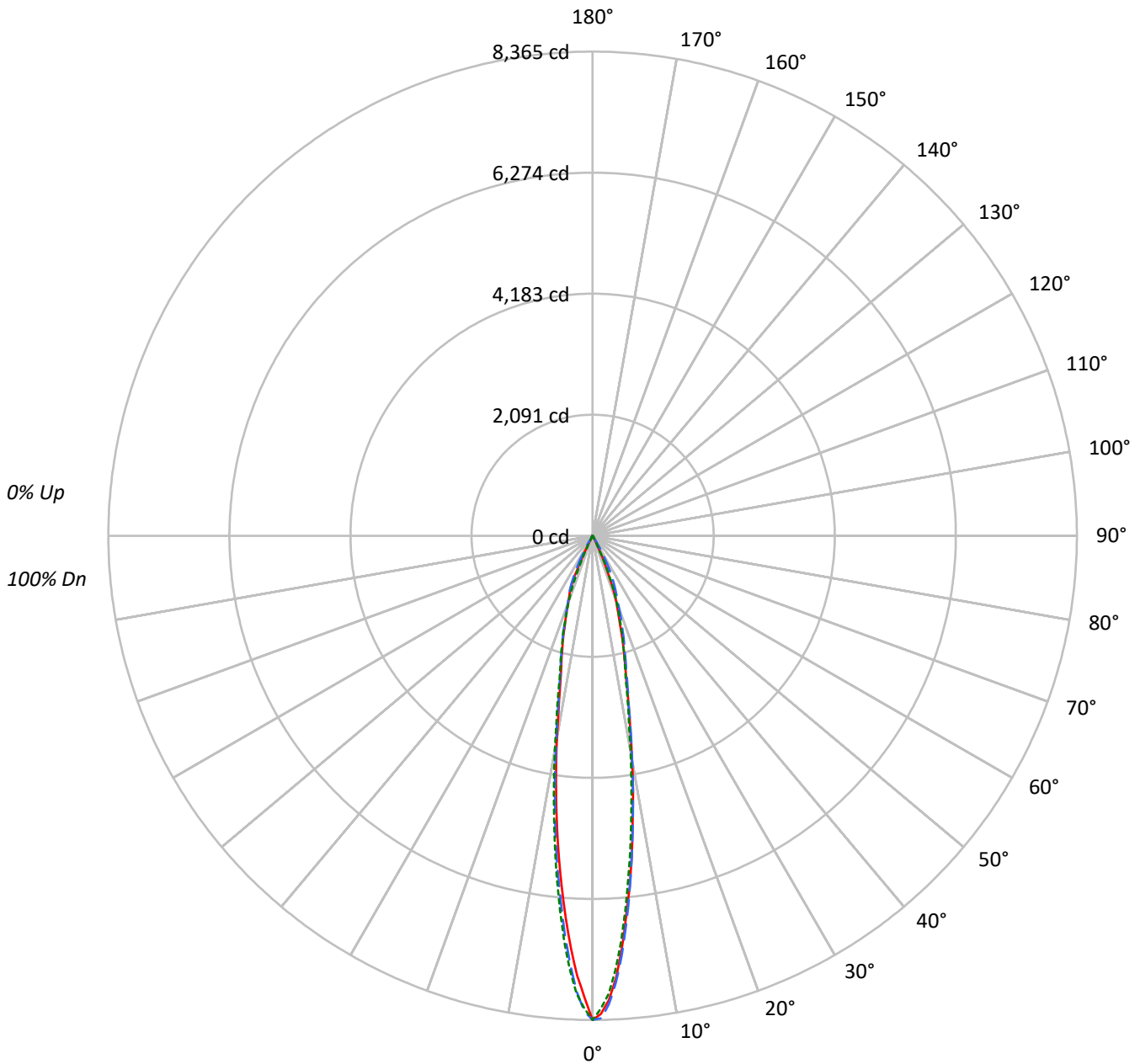
Input Watts (W): 28.81
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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															
1	115	113	111	110	113	111	109	108	107	106	105	103	102	101	100	99	99	97	97	99	97																
2	112	108	105	103	109	106	104	102	103	101	99	100	99	97	98	96	95	94	94	95	94																
3	108	104	100	97	106	102	99	97	100	97	95	98	95	94	96	94	92	91	92	92	91																
4	105	100	96	93	103	99	95	93	97	94	91	95	92	90	93	91	90	88	90	90	88																
5	102	96	92	89	101	95	92	89	94	91	88	92	90	88	91	89	87	86	87	87	86																
6	99	93	89	86	98	92	89	86	91	88	85	90	87	85	89	86	84	83	85	84	83																
7	97	90	86	83	95	90	86	83	89	85	83	88	85	82	87	84	82	81	83	82	81																
8	94	88	84	81	93	87	83	81	86	83	80	85	82	80	85	82	80	79	80	80	79																
9	92	85	81	79	91	85	81	79	84	81	78	83	80	78	83	80	78	77	78	78	77																
10	89	83	79	77	89	83	79	76	82	79	76	81	78	76	81	78	76	75	76	76	75																

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	360161	360161	360161
5°	286320	280209	263604
10°	170586	164304	154585
15°	93210	93366	90437
20°	53402	54882	56412
25°	14100	14656	26333
30°	1924	1780	1720
35°	773	741	710
40°	298	298	298
45°	140	110	140
50°	80	40	121
55°	45	0	90
60°	52	0	0
65°	61	0	0
70°	76	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°	531.2	37.5
10°-20°	597.8	42.3
20°-30°	266.2	18.8
30°-40°	16.2	1.1
40°-50°	2.6	0.2
50°-60°	0.5	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°	1395.2	98.6
0°-40°	1411.4	99.8
0°-60°	1414.5	100.0
0°-90°	1414.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1414.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8365	8365	8365	8365	8365	
5°	6625	6702	6483	6331	6099	545
15°	2091	2182	2095	2080	2029	590
25°	297	793	308	766	554	175
35°	15	24	14	24	14	11
45°	2	4	2	4	2	2
55°	1	1	0	1	1	1
65°	1	0	0	0	0	1
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°	8365.0	8365.0	8365.0	8365.0	8365.0	8365.0	8365.0	8365.0	8365.0
1°	8262.3	8338.0	8338.0	8319.8	8169.1	8281.1	8217.8	8149.7	7972.6
2°	8024.8	8101.6	8094.0	8024.8	7915.7	7962.0	7875.2	7790.7	7604.8
3°	7658.2	7740.9	7725.6	7653.5	7508.0	7536.2	7411.8	7347.9	7134.4
4°	7165.5	7270.5	7252.3	7172.5	7026.5	7024.7	6894.5	6827.0	6629.4
5°	6624.7	6734.3	6702.1	6636.4	6483.3	6455.7	6331.4	6283.3	6099.1
6°	6105.0	6173.6	6140.2	6085.6	5920.2	5903.2	5785.3	5744.2	5574.1
7°	5551.2	5598.8	5565.9	5523.7	5356.5	5334.2	5238.0	5205.8	5039.8
8°	4967.6	5035.7	4988.7	4962.3	4804.5	4774.0	4677.3	4655.6	4522.4
9°	4469.0	4491.9	4442.1	4362.9	4271.4	4240.3	4137.6	4116.5	4023.2
10°	3901.8	3972.8	3934.1	3866.0	3758.1	3781.6	3632.6	3615.0	3535.8
11°	3408.5	3483.0	3442.0	3381.0	3283.6	3297.1	3175.1	3101.2	3088.8
12°	3001.5	3035.5	3023.2	2973.9	2895.3	2899.4	2790.9	2731.6	2719.3
13°	2604.9	2665.9	2671.8	2631.3	2536.9	2580.3	2499.4	2451.3	2431.9
14°	2336.3	2382.6	2401.4	2400.2	2298.2	2336.3	2272.4	2233.6	2214.3
15°	2091.1	2151.5	2182.0	2180.3	2094.6	2133.3	2080.0	2049.5	2028.9
16°	1861.2	1943.9	1993.7	1985.5	1905.7	1945.6	1892.8	1862.9	1840.1
17°	1630.1	1743.9	1817.2	1801.3	1718.0	1768.5	1718.0	1692.2	1668.2
18°	1452.3	1545.6	1648.8	1614.8	1522.1	1600.7	1557.3	1536.8	1514.5
19°	1292.8	1356.7	1491.0	1430.6	1346.8	1435.9	1403.6	1387.2	1366.1
20°	1165.5	1220.6	1340.3	1268.7	1197.8	1270.5	1261.7	1248.8	1231.2
21°	1002.4	1107.4	1203.6	1137.3	1044.1	1146.7	1157.9	1150.8	1137.9
22°	793.6	982.5	1104.5	983.7	861.7	1056.4	1079.3	1074.0	1064.6
23°	617.7	835.3	1013.0	842.3	671.0	956.1	990.1	986.6	955.5
24°	450.5	683.9	898.0	676.3	482.7	819.4	884.5	878.7	766.1
25°	296.8	532.6	793.0	507.4	308.5	662.8	766.1	756.1	554.3
26°	190.6	389.5	698.6	346.7	164.2	495.1	640.5	612.4	343.7
27°	91.5	271.6	583.0	204.1	79.8	330.2	513.8	451.1	166.0
28°	57.5	142.5	463.4	101.5	54.0	183.6	393.6	286.2	65.1
29°	46.9	70.4	343.1	57.5	44.0	84.5	282.1	139.6	45.2
30°	38.7	46.9	234.0	44.0	35.8	46.9	185.4	54.6	34.6
32.5°	24.6	29.3	54.0	27.6	23.5	27.0	44.0	26.4	21.7
35°	14.7	18.8	23.5	18.2	14.1	17.6	24.0	17.0	13.5
37.5°	8.8	11.1	15.3	11.1	8.8	11.1	15.3	11.1	8.2
40°	5.3	7.0	10.6	7.0	5.3	7.0	10.6	7.0	5.3
42.5°	3.5	4.1	7.0	4.1	2.9	4.1	7.0	4.7	3.5
45°	2.3	2.9	4.1	2.3	1.8	2.3	4.1	2.9	2.3
47.5°	1.8	1.8	2.3	1.2	1.2	1.8	2.9	2.3	1.8
50°	1.2	1.2	1.8	0.6	0.6	0.6	1.8	1.8	1.8
52.5°	0.6	0.6	0.6	0.0	0.0	0.0	1.2	1.2	1.2
55°	0.6	0.6	0.6	0.0	0.0	0.0	0.6	1.2	1.2
57.5°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	1.2	1.2
60°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	1.2	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.6	0.6	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°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)