

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: P136754

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15835 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136754
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23378)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQ6A15D010TE ESQ6A15835 6LSQ1LI
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1629.0 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 0.92 / 0.93 / 0.95
Luminous Opening: Rectangular (W 0.46' x L: 0.46' x H: 0')
CIE Type: Direct

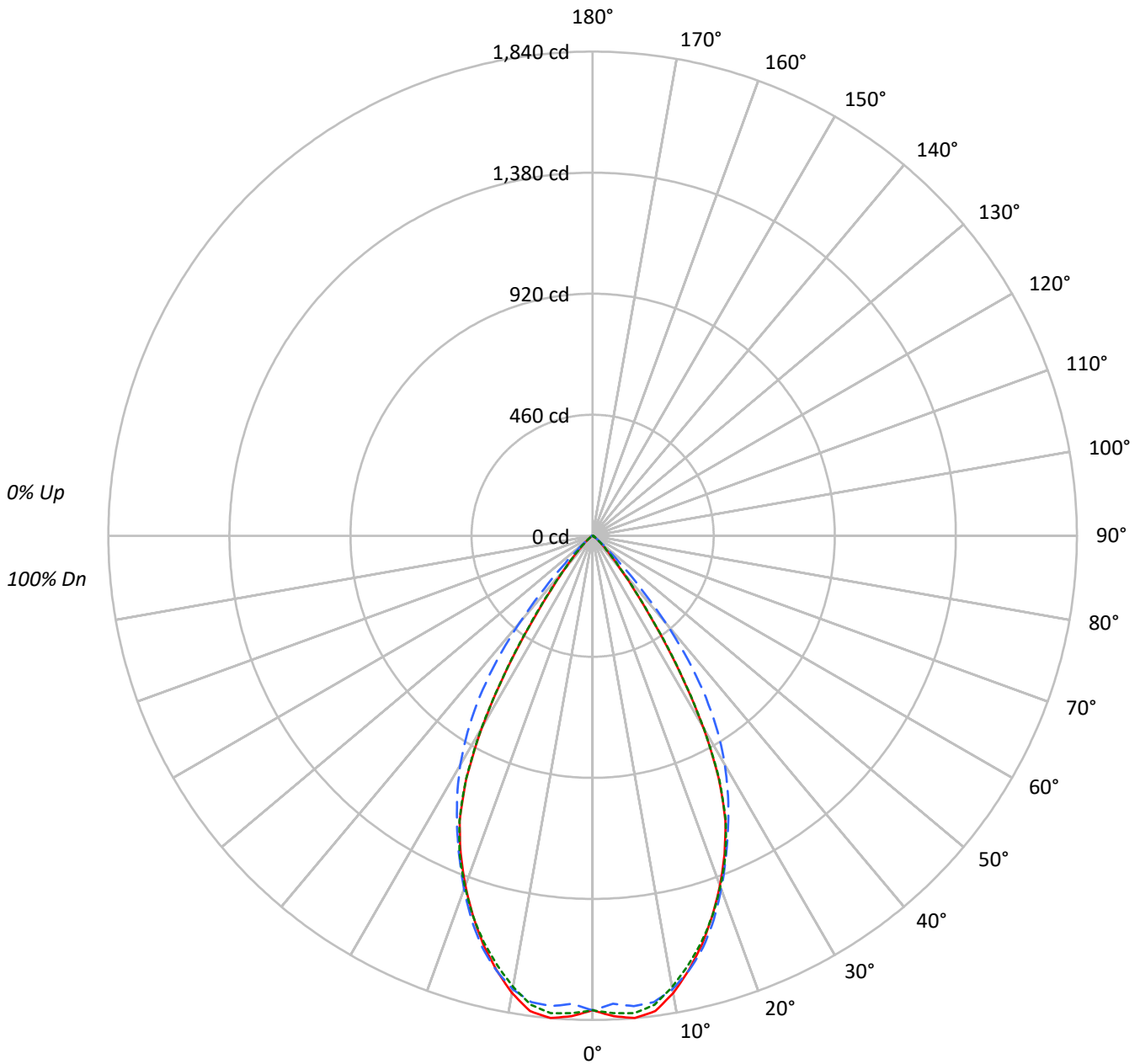
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P136754

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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																			
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94																			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	91	89	87																			
3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	88	85	83	81																			
4	97	90	84	80	96	89	84	80	87	82	79	85	81	78	83	80	77	75																			
5	92	84	78	74	91	83	78	74	81	77	73	80	76	72	78	75	72	70																			
6	88	79	73	69	86	78	73	69	77	72	68	75	71	68	74	70	67	66																			
7	84	74	68	64	82	74	68	64	72	67	64	71	67	63	70	66	63	62																			
8	79	70	64	60	78	69	64	60	68	63	60	67	63	59	66	62	59	58																			
9	76	66	60	56	75	66	60	56	65	59	56	64	59	56	63	59	56	54																			
10	72	62	57	53	71	62	56	53	61	56	53	60	56	52	60	55	52	51																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	92396	92396	92396
5°	94616	92281	93680
10°	91776	91027	90554
15°	85221	85942	84780
20°	77087	77866	77370
25°	67522	68890	67692
30°	49718	59474	49943
35°	25834	46933	26403
40°	10876	28789	11331
45°	4986	10688	5152
50°	2288	3197	2352
55°	1152	1286	1152
60°	697	779	697
65°	461	546	461
70°	345	345	345
75°	158	297	158
80°	236	236	236
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.7	10.5
10°-20°	448.6	27.5
20°-30°	548.5	33.7
30°-40°	352.5	21.6
40°-50°	87.9	5.4
50°-60°	14.7	0.9
60°-70°	4.5	0.3
70°-80°	1.4	0.1
80°-90°	0.3	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°	1167.8	71.7
0°-40°	1520.3	93.3
0°-60°	1622.9	99.6
0°-90°	1629.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1629.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1803	1803	1803	1803	1803	
5°	1840	1800	1794	1796	1821	173
15°	1606	1615	1620	1602	1598	448
25°	1194	1226	1218	1231	1197	533
35°	413	545	750	555	422	273
45°	69	86	148	91	71	59
55°	13	14	14	14	13	13
65°	4	4	4	4	4	4
75°	1	2	2	2	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1803.2	1803.2	1803.2	1803.2	1803.2	1803.2	1803.2	1803.2	1803.2	1803.2	1803.2
2.5°	1827.4	1782.0	1817.6	1814.5	1784.3	1790.3	1795.6	1794.9	1794.1	1780.5	1812.3
5°	1839.5	1793.3	1829.7	1825.1	1797.1	1803.2	1806.2	1807.7	1803.9	1794.1	1824.4
7.5°	1822.1	1779.0	1813.8	1808.5	1786.5	1791.8	1794.1	1797.9	1792.6	1787.3	1816.0
10°	1763.9	1727.5	1760.1	1756.3	1741.9	1748.0	1749.5	1755.5	1749.5	1749.5	1775.2
12.5°	1689.7	1661.7	1691.2	1688.2	1682.9	1689.7	1687.5	1698.0	1689.0	1692.0	1715.4
15°	1606.5	1588.4	1612.6	1611.8	1612.6	1617.9	1611.1	1618.6	1610.3	1620.1	1640.6
17.5°	1512.7	1504.4	1523.3	1524.1	1530.1	1531.6	1521.1	1530.9	1518.8	1530.1	1547.5
20°	1413.7	1415.2	1430.3	1428.0	1437.1	1432.6	1417.4	1427.3	1415.2	1428.0	1441.6
22.5°	1309.3	1322.1	1330.5	1328.9	1341.0	1335.0	1316.1	1320.6	1308.5	1322.9	1331.2
25°	1194.3	1208.7	1214.7	1214.7	1227.6	1225.3	1208.7	1216.2	1204.9	1218.5	1223.0
27.5°	1037.7	1055.9	1060.4	1069.5	1091.4	1096.0	1089.2	1104.3	1099.8	1114.1	1112.6
30°	840.3	858.5	865.3	883.4	919.0	940.2	951.5	981.0	988.6	1005.2	996.9
32.5°	619.5	634.6	644.4	671.7	718.5	761.7	800.2	844.1	867.6	885.7	870.6
35°	413.0	424.3	434.9	468.9	518.1	571.8	627.8	690.6	730.7	750.3	729.9
37.5°	259.4	267.0	273.8	298.8	338.1	388.0	447.8	519.6	574.8	598.3	572.6
40°	162.6	167.2	170.9	186.1	210.3	240.5	291.2	351.7	408.4	430.4	406.2
42.5°	104.4	106.6	108.9	117.2	130.1	149.0	177.0	214.8	254.1	269.3	253.4
45°	68.8	69.6	70.3	74.9	81.7	90.8	105.1	122.5	141.4	147.5	140.7
47.5°	45.4	45.4	46.1	49.2	52.9	58.2	63.5	68.1	74.1	77.1	73.4
50°	28.7	29.5	30.3	32.5	34.8	37.1	38.6	38.6	40.1	40.1	39.3
52.5°	17.4	17.4	18.2	18.9	21.9	24.2	24.2	22.7	22.7	22.7	21.9
55°	12.9	12.9	12.9	13.6	14.4	14.4	14.4	14.4	14.4	14.4	13.6
57.5°	9.8	9.8	9.8	10.6	10.6	10.6	10.6	9.8	9.8	9.8	9.8
60°	6.8	6.8	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	6.8
62.5°	5.3	5.3	5.3	6.1	6.1	6.1	6.1	6.1	6.1	5.3	5.3
65°	3.8	3.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
67.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.8	3.0	3.0	3.0	3.0
70°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
75°	0.8	0.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
77.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
82.5°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
85°	0.0	0.0	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	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1803.2	1803.2	1803.2	1803.2	1803.2	1803.2	1803.2	1803.2
2.5°	1819.8	1822.1	1788.8	1795.6	1819.8	1795.6	1796.4	1816.0
5°	1826.6	1825.9	1791.8	1800.2	1814.5	1797.1	1797.9	1821.3
7.5°	1811.5	1804.7	1770.7	1780.5	1784.3	1772.2	1772.2	1797.9
10°	1764.6	1753.3	1721.5	1731.3	1724.5	1717.0	1714.7	1740.4
12.5°	1703.3	1690.5	1663.3	1672.3	1655.7	1655.7	1648.9	1672.3
15°	1626.9	1615.6	1596.7	1607.3	1582.3	1587.6	1577.0	1598.2
17.5°	1535.4	1527.9	1517.3	1530.1	1500.6	1509.7	1495.3	1513.5
20°	1430.3	1426.5	1425.0	1437.9	1407.6	1422.7	1406.1	1418.9
22.5°	1321.4	1321.4	1329.7	1347.1	1313.8	1330.5	1310.8	1318.3
25°	1214.0	1214.7	1224.6	1236.7	1204.1	1218.5	1196.6	1197.3
27.5°	1099.8	1093.0	1103.5	1101.3	1060.4	1068.7	1045.3	1040.8
30°	974.2	953.8	946.2	925.0	878.9	877.4	853.2	844.1
32.5°	836.5	798.0	774.5	731.4	672.4	658.8	636.9	626.3
35°	683.8	625.5	583.2	526.4	468.2	448.5	431.1	422.1
37.5°	515.8	449.3	400.9	346.4	304.8	288.9	274.6	268.5
40°	351.7	295.0	253.4	217.1	191.4	181.5	173.2	169.4
42.5°	217.1	180.8	156.6	134.6	120.3	115.0	111.2	108.9
45°	124.0	107.4	96.8	84.7	77.9	74.9	72.6	71.1
47.5°	68.8	64.3	60.5	55.2	50.7	48.4	47.7	46.9
50°	38.6	39.3	39.3	36.3	34.0	31.8	30.3	29.5
52.5°	22.7	24.2	25.0	22.7	19.7	18.2	18.2	17.4
55°	14.4	14.4	14.4	14.4	13.6	12.9	12.9	12.9
57.5°	9.8	9.8	10.6	10.6	10.6	9.8	9.8	9.1
60°	7.6	7.6	7.6	7.6	7.6	7.6	6.8	6.8
62.5°	6.1	6.1	6.1	6.1	6.1	5.3	5.3	5.3
65°	4.5	4.5	4.5	4.5	4.5	3.8	3.8	3.8
67.5°	3.0	3.8	3.0	3.0	3.0	3.0	3.0	3.0
70°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
75°	1.5	1.5	1.5	1.5	1.5	0.8	0.8	0.8
77.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.8
85°	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
90°	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°









(END OF REPORT)