

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: P136759

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15940 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136759
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 ESQ6A15940 6LSQ1LI
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1531.6 lumens
Efficiency: N/A
Efficacy: 67.8 lumens/watt
Spacing Criteria (0/90/45): 0.92 / 0.92 / 0.95
Luminous Opening: Rectangular (W 0.46' x L: 0.46' x H: 0')
CIE Type: Direct

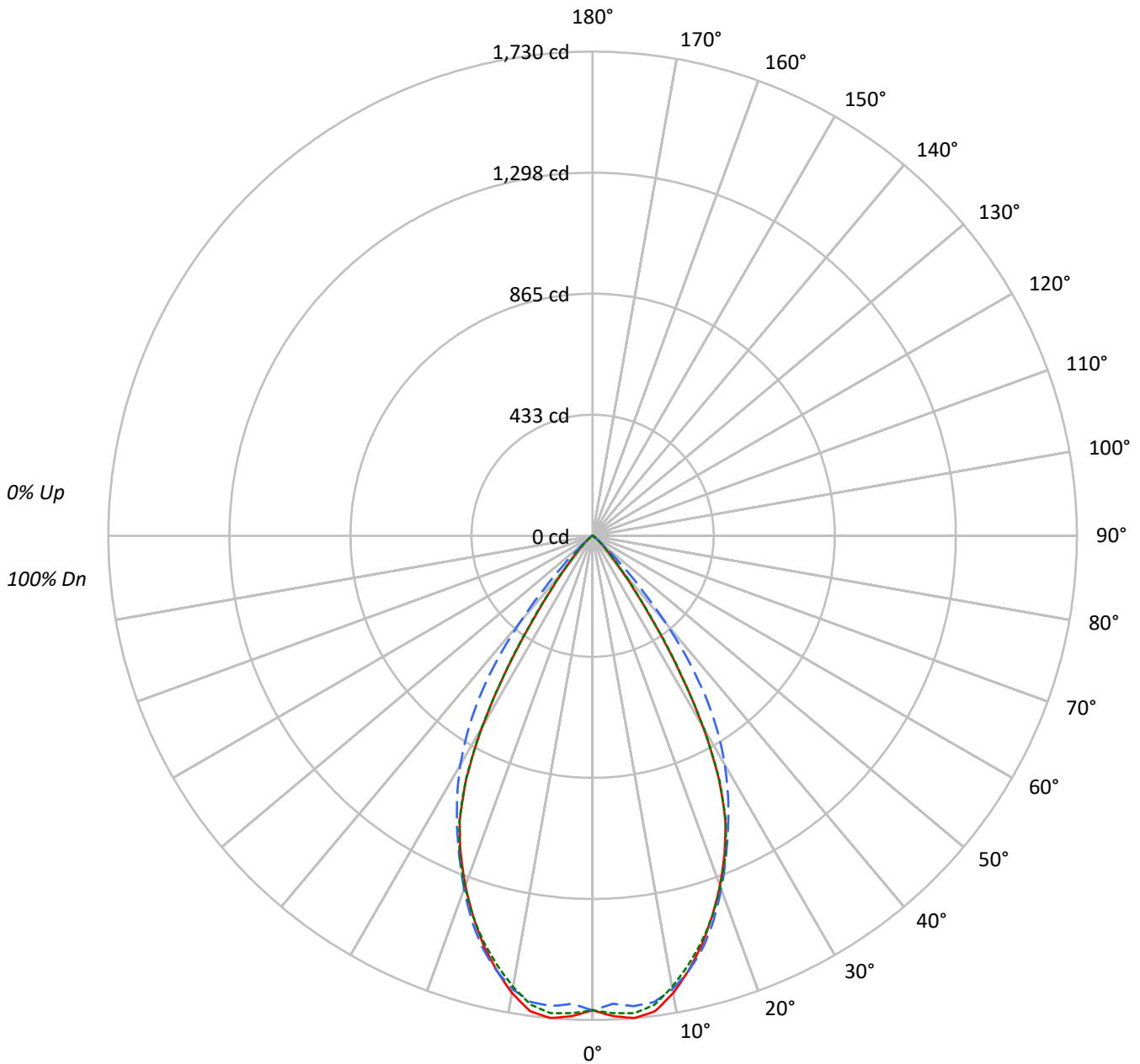
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	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°	86872	86872	86872
5°	88958	86767	88078
10°	86287	85585	85137
15°	80128	80807	79714
20°	72479	73210	72752
25°	63485	64769	63644
30°	46748	55918	46955
35°	24289	44131	24827
40°	10227	27070	10655
45°	4688	10051	4848
50°	2152	3005	2208
55°	1081	1206	1081
60°	656	728	656
65°	436	509	436
70°	315	315	315
75°	139	277	139
80°	207	207	207
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.5	10.5
10°-20°	421.8	27.5
20°-30°	515.7	33.7
30°-40°	331.4	21.6
40°-50°	82.7	5.4
50°-60°	13.8	0.9
60°-70°	4.2	0.3
70°-80°	1.2	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°	1098.0	71.7
0°-40°	1429.4	93.3
0°-60°	1525.9	99.6
0°-90°	1531.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1531.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1695	1695	1695	1695	1695	
5°	1730	1693	1687	1689	1712	163
15°	1510	1519	1523	1506	1503	422
25°	1123	1153	1146	1157	1126	501
35°	388	512	706	522	397	257
45°	65	81	139	85	67	56
55°	12	14	14	14	12	12
65°	4	4	4	4	4	4
75°	1	1	1	1	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°	1695.4	1695.4	1695.4	1695.4	1695.4	1695.4	1695.4	1695.4	1695.4	1695.4	1695.4
2.5°	1718.1	1675.5	1708.9	1706.1	1677.6	1683.3	1688.3	1687.5	1686.9	1674.1	1703.9
5°	1729.5	1686.2	1720.2	1716.0	1689.7	1695.4	1698.2	1699.6	1696.1	1686.9	1715.3
7.5°	1713.2	1672.6	1705.3	1700.4	1679.7	1684.7	1686.9	1690.4	1685.4	1680.5	1707.4
10°	1658.4	1624.3	1654.9	1651.3	1637.8	1643.4	1644.9	1650.6	1644.9	1644.9	1669.0
12.5°	1588.7	1562.4	1590.1	1587.3	1582.3	1588.7	1586.6	1596.6	1588.0	1590.8	1612.9
15°	1510.5	1493.4	1516.2	1515.5	1516.2	1521.1	1514.8	1521.9	1514.0	1523.3	1542.5
17.5°	1422.3	1414.5	1432.2	1433.0	1438.7	1440.1	1430.1	1439.3	1428.0	1438.7	1455.0
20°	1329.2	1330.6	1344.8	1342.6	1351.2	1347.0	1332.7	1342.0	1330.6	1342.6	1355.4
22.5°	1231.0	1243.1	1250.9	1249.5	1260.8	1255.2	1237.4	1241.7	1230.3	1243.8	1251.6
25°	1122.9	1136.4	1142.1	1142.1	1154.2	1152.1	1136.4	1143.5	1132.8	1145.6	1150.0
27.5°	975.7	992.7	997.1	1005.5	1026.2	1030.5	1024.1	1038.2	1034.0	1047.5	1046.1
30°	790.1	807.2	813.5	830.6	864.1	884.0	894.7	922.4	929.5	945.1	937.3
32.5°	582.4	596.6	605.9	631.5	675.6	716.2	752.4	793.6	815.7	832.8	818.6
35°	388.3	399.0	408.9	440.9	487.1	537.6	590.3	649.3	687.0	705.5	686.2
37.5°	243.9	251.1	257.4	280.9	317.9	364.8	421.0	488.6	540.4	562.5	538.3
40°	152.9	157.1	160.7	175.0	197.7	226.1	273.8	330.7	384.1	404.7	381.8
42.5°	98.2	100.3	102.4	110.2	122.3	140.1	166.4	202.0	238.9	253.2	238.3
45°	64.7	65.4	66.1	70.4	76.8	85.4	98.8	115.2	133.0	138.7	132.3
47.5°	42.6	42.6	43.4	46.2	49.8	54.8	59.8	64.0	69.7	72.6	69.0
50°	27.0	27.7	28.5	30.6	32.7	34.8	36.3	36.3	37.7	37.7	37.0
52.5°	16.4	16.4	17.0	17.8	20.6	22.7	22.7	21.4	21.4	21.4	20.6
55°	12.1	12.1	12.1	12.8	13.5	13.5	13.5	13.5	13.5	13.5	12.8
57.5°	9.2	9.2	9.2	9.9	9.9	9.9	9.9	9.2	9.2	9.2	9.2
60°	6.4	6.4	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	6.4
62.5°	5.0	5.0	5.0	5.7	5.7	5.7	5.7	5.7	5.7	5.0	5.0
65°	3.6	3.6	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
67.5°	2.9	2.9	2.9	2.9	2.9	2.9	3.6	2.9	2.9	2.9	2.9
70°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
75°	0.7	0.7	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.0	0.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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°	1695.4	1695.4	1695.4	1695.4	1695.4	1695.4	1695.4	1695.4
2.5°	1711.0	1713.2	1681.8	1688.3	1711.0	1688.3	1689.0	1707.4
5°	1717.5	1716.7	1684.7	1692.5	1706.1	1689.7	1690.4	1712.4
7.5°	1703.2	1696.9	1664.8	1674.1	1677.6	1666.3	1666.3	1690.4
10°	1659.1	1648.5	1618.6	1627.9	1621.4	1614.3	1612.2	1636.3
12.5°	1601.5	1589.5	1563.9	1572.3	1556.7	1556.7	1550.3	1572.3
15°	1529.7	1519.0	1501.2	1511.2	1487.7	1492.8	1482.7	1502.7
17.5°	1443.7	1436.6	1426.5	1438.7	1411.0	1419.4	1405.9	1423.0
20°	1344.8	1341.3	1339.8	1351.9	1323.5	1337.7	1322.0	1334.2
22.5°	1242.4	1242.4	1250.2	1266.6	1235.2	1250.9	1232.4	1239.6
25°	1141.4	1142.1	1151.3	1162.8	1132.2	1145.6	1125.0	1125.7
27.5°	1034.0	1027.7	1037.6	1035.5	997.1	1004.9	982.8	978.6
30°	915.9	896.8	889.7	869.7	826.3	824.9	802.2	793.6
32.5°	786.5	750.2	728.2	687.7	632.2	619.4	598.8	588.8
35°	642.9	588.2	548.3	494.9	440.2	421.7	405.3	396.9
37.5°	485.0	422.5	376.9	325.7	286.6	271.7	258.2	252.4
40°	330.7	277.3	238.3	204.1	180.0	170.7	162.8	159.3
42.5°	204.1	169.9	147.2	126.5	113.1	108.1	104.5	102.4
45°	116.6	100.9	91.0	79.7	73.2	70.4	68.2	66.9
47.5°	64.7	60.4	56.9	51.9	47.6	45.5	44.8	44.1
50°	36.3	37.0	37.0	34.2	32.0	29.8	28.5	27.7
52.5°	21.4	22.7	23.5	21.4	18.5	17.0	17.0	16.4
55°	13.5	13.5	13.5	13.5	12.8	12.1	12.1	12.1
57.5°	9.2	9.2	9.9	9.9	9.9	9.2	9.2	8.6
60°	7.1	7.1	7.1	7.1	7.1	7.1	6.4	6.4
62.5°	5.7	5.7	5.7	5.7	5.7	5.0	5.0	5.0
65°	4.2	4.2	4.2	4.2	4.2	3.6	3.6	3.6
67.5°	2.9	3.6	2.9	2.9	2.9	2.9	2.9	2.9
70°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
75°	1.4	1.4	1.4	1.4	1.4	0.7	0.7	0.7
77.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.7
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



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180° - - 45°-225° - - - - 90°-270°









(END OF REPORT)