

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: P136758

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15935 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136758
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 ESQ6A15935 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: 1500.3 lumens
Efficiency: N/A
Efficacy: 66.4 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

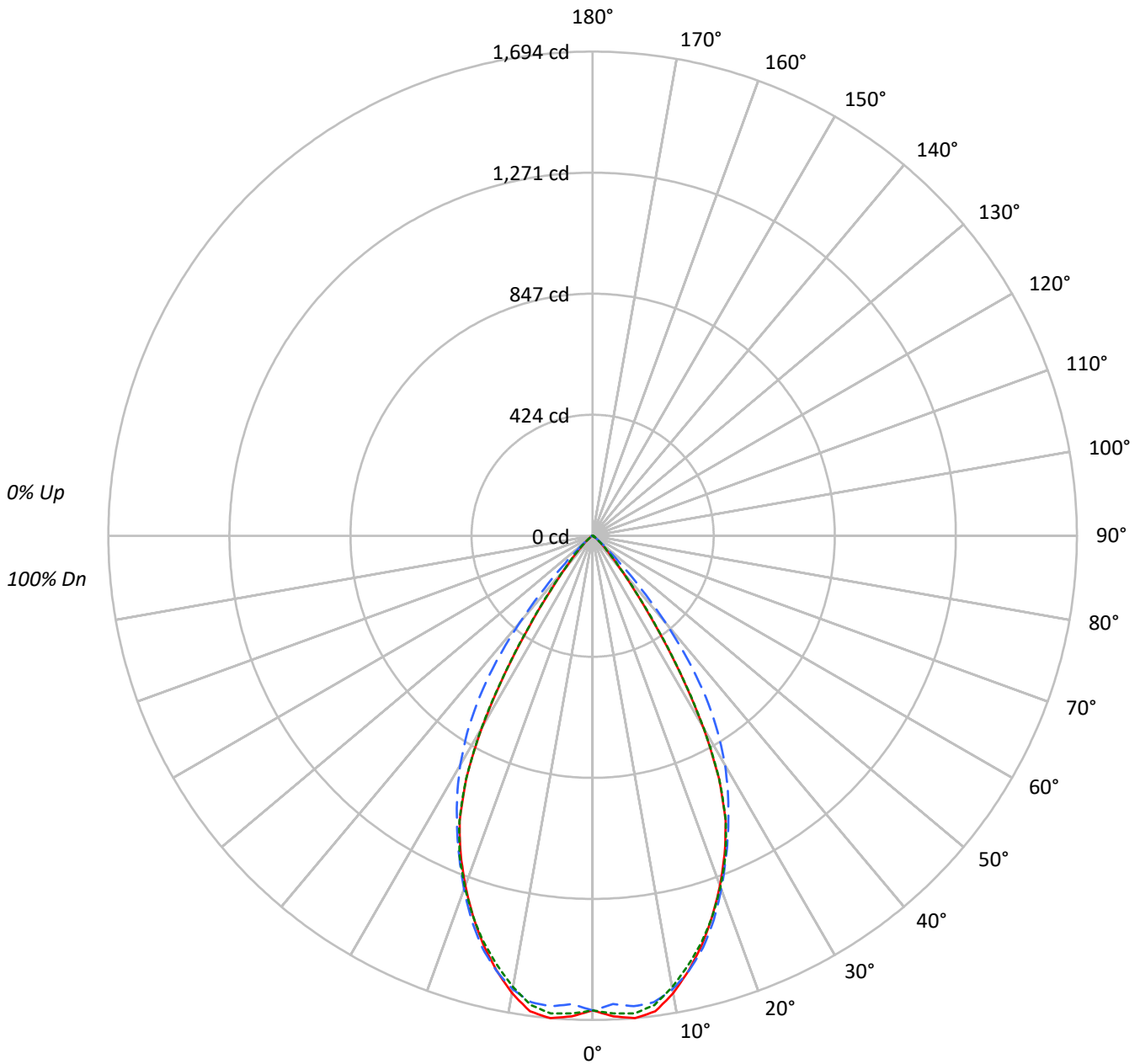
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					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°	85094	85094	85094
5°	87142	84992	86278
10°	84528	83836	83399
15°	78489	79152	78080
20°	70996	71716	71258
25°	62191	63446	62343
30°	45789	54777	45996
35°	23795	43224	24320
40°	10020	26515	10435
45°	4594	9841	4746
50°	2104	2941	2168
55°	1063	1188	1063
60°	646	717	646
65°	424	497	424
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°	157.2	10.5
10°-20°	413.2	27.5
20°-30°	505.2	33.7
30°-40°	324.6	21.6
40°-50°	81.0	5.4
50°-60°	13.6	0.9
60°-70°	4.1	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°	1075.5	71.7
0°-40°	1400.1	93.3
0°-60°	1494.7	99.6
0°-90°	1500.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1500.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1661	1661	1661	1661	1661	
5°	1694	1658	1652	1654	1677	159
15°	1480	1488	1492	1475	1472	413
25°	1100	1130	1122	1133	1103	491
35°	380	502	691	511	389	252
45°	63	79	136	84	66	55
55°	12	13	13	13	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°	1660.7	1660.7	1660.7	1660.7	1660.7	1660.7	1660.7	1660.7	1660.7	1660.7	1660.7
2.5°	1683.0	1641.2	1674.0	1671.2	1643.3	1648.9	1653.7	1653.1	1652.4	1639.8	1669.1
5°	1694.2	1651.6	1685.2	1680.9	1655.1	1660.7	1663.5	1664.9	1661.4	1652.4	1680.3
7.5°	1678.2	1638.5	1670.5	1665.6	1645.4	1650.2	1652.4	1655.9	1651.0	1646.1	1672.5
10°	1624.6	1591.0	1621.1	1617.6	1604.3	1609.9	1611.3	1616.8	1611.3	1611.3	1635.0
12.5°	1556.2	1530.4	1557.6	1554.8	1550.0	1556.2	1554.2	1563.9	1555.6	1558.3	1579.9
15°	1479.6	1462.9	1485.2	1484.5	1485.2	1490.1	1483.8	1490.7	1483.1	1492.1	1511.0
17.5°	1393.2	1385.6	1403.0	1403.7	1409.2	1410.6	1400.9	1410.0	1398.8	1409.2	1425.2
20°	1302.0	1303.4	1317.3	1315.2	1323.6	1319.4	1305.4	1314.5	1303.4	1315.2	1327.7
22.5°	1205.9	1217.7	1225.4	1223.9	1235.1	1229.5	1212.1	1216.3	1205.1	1218.4	1226.0
25°	1100.0	1113.2	1118.7	1118.7	1130.6	1128.5	1113.2	1120.1	1109.7	1122.2	1126.4
27.5°	955.7	972.5	976.6	985.0	1005.2	1009.4	1003.2	1017.1	1012.9	1026.1	1024.7
30°	773.9	790.7	796.9	813.6	846.4	865.9	876.3	903.5	910.5	925.8	918.1
32.5°	570.6	584.5	593.5	618.6	661.7	701.5	737.0	777.4	799.1	815.7	801.8
35°	380.4	390.8	400.5	431.9	477.2	526.6	578.2	636.0	673.0	691.0	672.2
37.5°	238.9	245.9	252.2	275.2	311.4	357.3	412.4	478.6	529.4	551.0	527.4
40°	149.8	154.0	157.4	171.4	193.7	221.5	268.2	323.9	376.1	396.4	374.1
42.5°	96.2	98.2	100.3	107.9	119.8	137.2	163.0	197.8	234.0	248.0	233.4
45°	63.4	64.1	64.7	69.0	75.2	83.6	96.8	112.8	130.2	135.8	129.6
47.5°	41.8	41.8	42.5	45.3	48.7	53.6	58.5	62.7	68.2	71.0	67.6
50°	26.4	27.2	27.9	29.9	32.1	34.2	35.6	35.6	36.9	36.9	36.2
52.5°	16.0	16.0	16.8	17.4	20.2	22.3	22.3	20.9	20.9	20.9	20.2
55°	11.9	11.9	11.9	12.5	13.3	13.3	13.3	13.3	13.3	13.3	12.5
57.5°	9.0	9.0	9.0	9.8	9.8	9.8	9.8	9.0	9.0	9.0	9.0
60°	6.3	6.3	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	6.3
62.5°	4.9	4.9	4.9	5.6	5.6	5.6	5.6	5.6	5.6	4.9	4.9
65°	3.5	3.5	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
67.5°	2.8	2.8	2.8	2.8	2.8	2.8	3.5	2.8	2.8	2.8	2.8
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°	1660.7	1660.7	1660.7	1660.7	1660.7	1660.7	1660.7	1660.7
2.5°	1676.0	1678.2	1647.5	1653.7	1676.0	1653.7	1654.5	1672.5
5°	1682.3	1681.7	1650.2	1658.0	1671.2	1655.1	1655.9	1677.4
7.5°	1668.4	1662.1	1630.8	1639.8	1643.3	1632.2	1632.2	1655.9
10°	1625.2	1614.8	1585.5	1594.5	1588.3	1581.4	1579.2	1602.9
12.5°	1568.7	1557.0	1531.9	1540.2	1524.9	1524.9	1518.6	1540.2
15°	1498.4	1488.0	1470.6	1480.3	1457.3	1462.2	1452.4	1471.9
17.5°	1414.1	1407.2	1397.4	1409.2	1382.1	1390.4	1377.2	1393.9
20°	1317.3	1313.8	1312.4	1324.3	1296.4	1310.3	1295.0	1306.8
22.5°	1217.0	1217.0	1224.7	1240.7	1210.0	1225.4	1207.2	1214.2
25°	1118.1	1118.7	1127.9	1139.0	1109.0	1122.2	1102.1	1102.7
27.5°	1012.9	1006.7	1016.3	1014.3	976.6	984.3	962.7	958.6
30°	897.2	878.4	871.5	851.9	809.5	808.1	785.8	777.4
32.5°	770.4	735.0	713.3	673.6	619.3	606.8	586.6	576.8
35°	629.8	576.1	537.1	484.8	431.2	413.1	397.0	388.8
37.5°	475.1	413.8	369.2	319.0	280.7	266.1	252.9	247.3
40°	323.9	271.7	233.4	199.9	176.3	167.2	159.5	156.0
42.5°	199.9	166.5	144.2	124.0	110.8	105.9	102.4	100.3
45°	114.2	98.9	89.2	78.0	71.7	69.0	66.9	65.5
47.5°	63.4	59.2	55.7	50.8	46.7	44.6	43.9	43.2
50°	35.6	36.2	36.2	33.4	31.3	29.3	27.9	27.2
52.5°	20.9	22.3	23.0	20.9	18.1	16.8	16.8	16.0
55°	13.3	13.3	13.3	13.3	12.5	11.9	11.9	11.9
57.5°	9.0	9.0	9.8	9.8	9.8	9.0	9.0	8.4
60°	7.0	7.0	7.0	7.0	7.0	7.0	6.3	6.3
62.5°	5.6	5.6	5.6	5.6	5.6	4.9	4.9	4.9
65°	4.1	4.1	4.1	4.1	4.1	3.5	3.5	3.5
67.5°	2.8	3.5	2.8	2.8	2.8	2.8	2.8	2.8
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)