

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: P136756

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15927 6LSQ1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136756  
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 ESQ6A15927 6LSQ1LI  
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT  
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 2700K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1397.1 lumens  
Efficiency: N/A  
Efficacy: 61.8 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

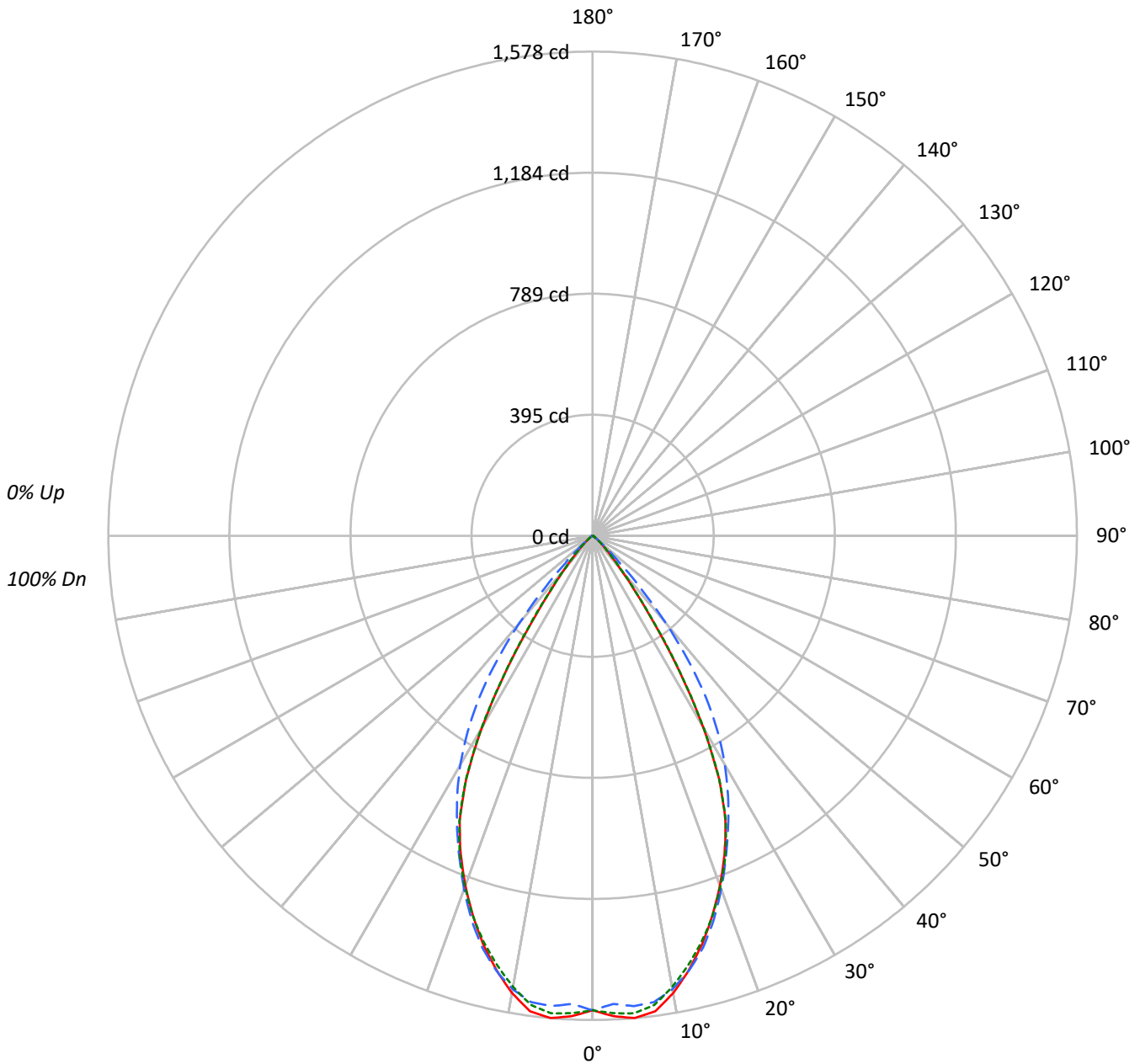
Input Watts (W): 22.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	79242	79242	79242
5°	81150	79149	80348
10°	78711	78072	77666
15°	73094	73709	72712
20°	66116	66781	66361
25°	57911	59087	58058
30°	42641	51008	42837
35°	22156	40252	22644
40°	9324	24689	9719
45°	4275	9167	4420
50°	1969	2742	2017
55°	992	1099	992
60°	594	656	594
65°	388	473	388
70°	285	285	285
75°	119	257	119
80°	177	177	177
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.4	10.5
10°-20°	384.8	27.5
20°-30°	470.4	33.7
30°-40°	302.3	21.6
40°-50°	75.4	5.4
50°-60°	12.6	0.9
60°-70°	3.8	0.3
70°-80°	1.1	0.1
80°-90°	0.2	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°	1001.6	71.7
0°-40°	1303.9	93.3
0°-60°	1391.9	99.6
0°-90°	1397.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1397.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1546	1546	1546	1546	1546	
5°	1578	1544	1539	1540	1562	148
15°	1378	1385	1390	1374	1371	385
25°	1024	1052	1045	1055	1027	457
35°	354	467	644	476	362	234
45°	59	74	126	78	61	51
55°	11	12	12	12	11	11
65°	3	4	4	4	3	3
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°	1546.5	1546.5	1546.5	1546.5	1546.5	1546.5	1546.5	1546.5	1546.5	1546.5	1546.5
2.5°	1567.3	1528.4	1558.9	1556.3	1530.3	1535.5	1540.1	1539.5	1538.8	1527.1	1554.4
5°	1577.7	1538.1	1569.3	1565.3	1541.4	1546.5	1549.1	1550.4	1547.2	1538.8	1564.7
7.5°	1562.8	1525.8	1555.7	1551.1	1532.3	1536.8	1538.8	1542.0	1537.4	1532.9	1557.6
10°	1512.8	1481.7	1509.6	1506.3	1494.0	1499.2	1500.5	1505.7	1500.5	1500.5	1522.5
12.5°	1449.3	1425.2	1450.6	1447.9	1443.4	1449.3	1447.3	1456.4	1448.5	1451.2	1471.3
15°	1377.9	1362.3	1383.1	1382.4	1383.1	1387.6	1381.8	1388.2	1381.1	1389.5	1407.1
17.5°	1297.4	1290.3	1306.5	1307.2	1312.3	1313.6	1304.6	1313.0	1302.7	1312.3	1327.3
20°	1212.5	1213.8	1226.8	1224.7	1232.6	1228.7	1215.7	1224.1	1213.8	1224.7	1236.4
22.5°	1123.0	1133.9	1141.1	1139.8	1150.1	1145.0	1128.8	1132.6	1122.3	1134.6	1141.8
25°	1024.3	1036.7	1041.8	1041.8	1052.9	1051.0	1036.7	1043.1	1033.5	1045.1	1049.0
27.5°	890.1	905.6	909.5	917.3	936.1	940.0	934.2	947.2	943.2	955.5	954.2
30°	720.7	736.3	742.1	757.7	788.2	806.3	816.1	841.4	847.9	862.1	855.1
32.5°	531.3	544.3	552.7	576.1	616.2	653.3	686.3	724.0	744.1	759.6	746.7
35°	354.2	363.9	373.0	402.2	444.4	490.4	538.4	592.3	626.6	643.5	626.0
37.5°	222.5	229.0	234.9	256.2	290.0	332.8	384.1	445.7	493.0	513.2	491.1
40°	139.4	143.4	146.6	159.6	180.3	206.3	249.8	301.6	350.3	369.1	348.3
42.5°	89.5	91.5	93.4	100.6	111.6	127.8	151.8	184.2	218.0	231.0	217.4
45°	59.0	59.7	60.3	64.2	70.1	77.8	90.2	105.1	121.3	126.5	120.7
47.5°	39.0	39.0	39.6	42.2	45.4	49.9	54.5	58.4	63.5	66.1	62.9
50°	24.7	25.3	26.0	27.9	29.8	31.8	33.1	33.1	34.4	34.4	33.7
52.5°	14.9	14.9	15.6	16.2	18.8	20.7	20.7	19.4	19.4	19.4	18.8
55°	11.1	11.1	11.1	11.7	12.3	12.3	12.3	12.3	12.3	12.3	11.7
57.5°	8.5	8.5	8.5	9.1	9.1	9.1	9.1	8.5	8.5	8.5	8.5
60°	5.8	5.8	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	5.8
62.5°	4.5	4.5	4.5	5.2	5.2	5.2	5.2	5.2	5.2	4.5	4.5
65°	3.2	3.2	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
67.5°	2.6	2.6	2.6	2.6	2.6	2.6	3.2	2.6	2.6	2.6	2.6
70°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
72.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
75°	0.6	0.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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°	1546.5	1546.5	1546.5	1546.5	1546.5	1546.5	1546.5	1546.5
2.5°	1560.8	1562.8	1534.2	1540.1	1560.8	1540.1	1540.7	1557.6
5°	1566.6	1566.0	1536.8	1544.0	1556.3	1541.4	1542.0	1562.1
7.5°	1553.7	1547.8	1518.6	1527.1	1530.3	1519.9	1519.9	1542.0
10°	1513.5	1503.7	1476.5	1484.9	1479.1	1472.6	1470.7	1492.7
12.5°	1460.9	1449.9	1426.5	1434.4	1420.1	1420.1	1414.2	1434.4
15°	1395.4	1385.6	1369.4	1378.6	1357.1	1361.7	1352.6	1370.7
17.5°	1316.9	1310.4	1301.4	1312.3	1287.1	1294.8	1282.5	1298.1
20°	1226.8	1223.5	1222.2	1233.2	1207.2	1220.2	1206.0	1217.0
22.5°	1133.3	1133.3	1140.5	1155.4	1126.8	1141.1	1124.3	1130.7
25°	1041.2	1041.8	1050.3	1060.6	1032.7	1045.1	1026.3	1026.9
27.5°	943.2	937.4	946.5	944.6	909.5	916.7	896.5	892.6
30°	835.5	818.0	811.6	793.3	753.8	752.5	731.7	724.0
32.5°	717.5	684.4	664.3	627.3	576.7	565.0	546.2	537.1
35°	586.4	536.5	500.2	451.5	401.6	384.7	369.8	362.0
37.5°	442.4	385.3	343.8	297.1	261.5	247.8	235.5	230.2
40°	301.6	253.0	217.4	186.2	164.1	155.6	148.6	145.3
42.5°	186.2	155.0	134.3	115.5	103.2	98.6	95.3	93.4
45°	106.4	92.1	83.1	72.7	66.8	64.2	62.3	61.0
47.5°	59.0	55.2	51.9	47.3	43.5	41.5	40.9	40.2
50°	33.1	33.7	33.7	31.1	29.2	27.3	26.0	25.3
52.5°	19.4	20.7	21.4	19.4	16.9	15.6	15.6	14.9
55°	12.3	12.3	12.3	12.3	11.7	11.1	11.1	11.1
57.5°	8.5	8.5	9.1	9.1	9.1	8.5	8.5	7.8
60°	6.4	6.4	6.4	6.4	6.4	6.4	5.8	5.8
62.5°	5.2	5.2	5.2	5.2	5.2	4.5	4.5	4.5
65°	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2
67.5°	2.6	3.2	2.6	2.6	2.6	2.6	2.6	2.6
70°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
72.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
75°	1.3	1.3	1.3	1.3	1.3	0.6	0.6	0.6
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
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)