

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: P136723

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10840 6LSQ1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136723  
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: LDSQ6A10D010TE ESQ6A10840 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: 1283.0 lumens  
Efficiency: N/A  
Efficacy: 91.6 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

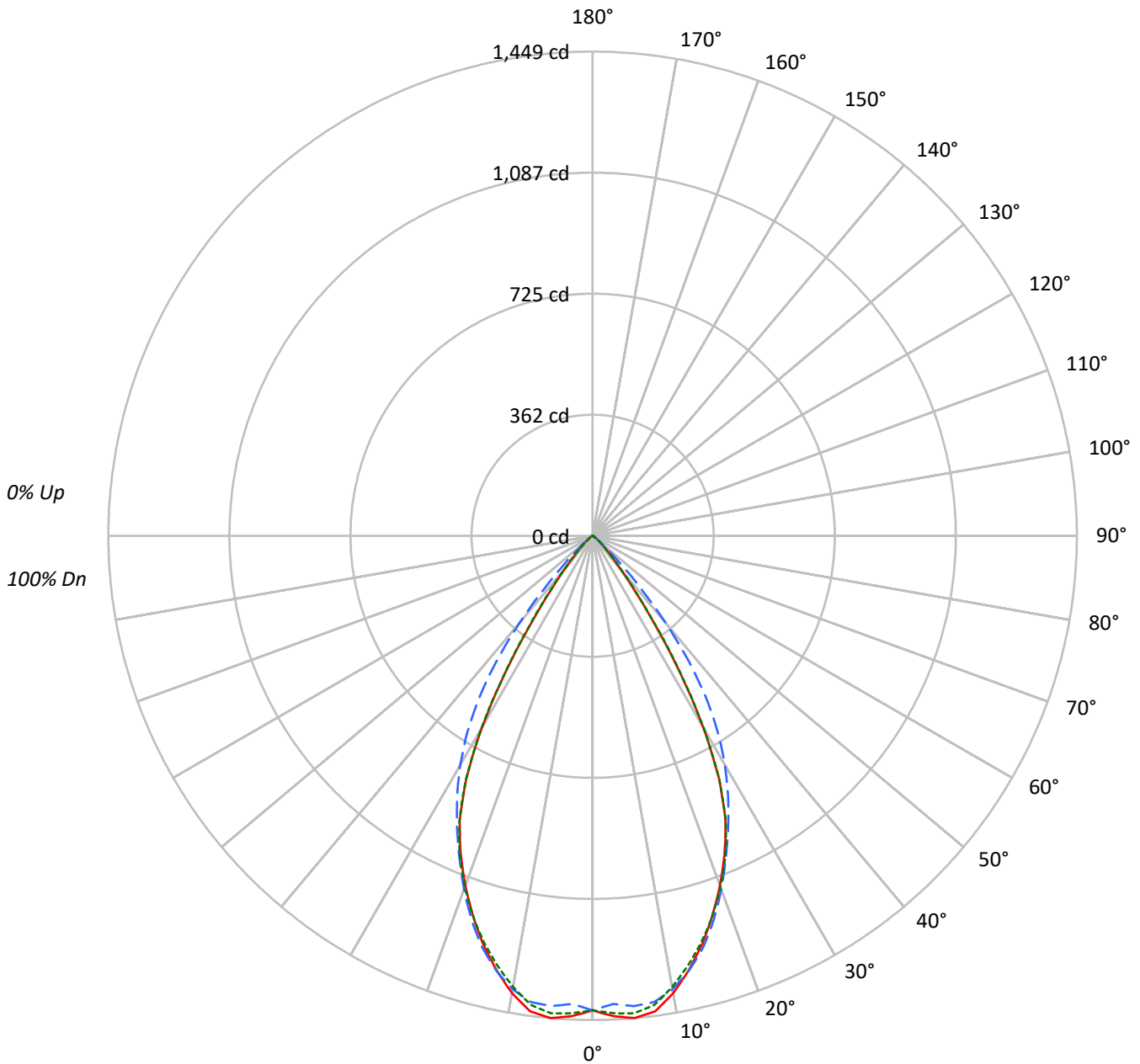
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	72771	72771	72771
5°	74520	72678	73784
10°	72281	71693	71318
15°	67121	67689	66771
20°	60712	61328	60941
25°	53179	54259	53314
30°	39157	46842	39334
35°	20348	36962	20792
40°	8568	22675	8923
45°	3928	8420	4058
50°	1802	2519	1849
55°	902	1009	902
60°	553	615	553
65°	364	436	364
70°	270	270	270
75°	119	238	119
80°	177	177	177
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.4	10.5
10°-20°	353.3	27.5
20°-30°	432.0	33.7
30°-40°	277.6	21.6
40°-50°	69.3	5.4
50°-60°	11.6	0.9
60°-70°	3.5	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°	919.7	71.7
0°-40°	1197.4	93.3
0°-60°	1278.2	99.6
0°-90°	1283.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1283.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1420	1420	1420	1420	1420	
5°	1449	1418	1413	1414	1434	136
15°	1265	1272	1276	1262	1259	353
25°	941	966	960	969	943	419
35°	325	429	591	437	332	215
45°	54	68	116	72	56	47
55°	10	11	11	11	10	10
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°	1420.2	1420.2	1420.2	1420.2	1420.2	1420.2	1420.2	1420.2	1420.2	1420.2	1420.2
2.5°	1439.2	1403.5	1431.5	1429.1	1405.3	1410.1	1414.2	1413.6	1413.0	1402.3	1427.3
5°	1448.8	1412.4	1441.0	1437.5	1415.4	1420.2	1422.6	1423.8	1420.8	1413.0	1436.9
7.5°	1435.1	1401.1	1428.5	1424.4	1407.1	1411.2	1413.0	1416.0	1411.8	1407.7	1430.3
10°	1389.2	1360.6	1386.2	1383.3	1371.9	1376.7	1377.9	1382.7	1377.9	1377.9	1398.1
12.5°	1330.8	1308.8	1332.0	1329.6	1325.5	1330.8	1329.0	1337.4	1330.2	1332.6	1351.1
15°	1265.3	1251.0	1270.1	1269.5	1270.1	1274.2	1268.9	1274.8	1268.3	1276.0	1292.1
17.5°	1191.4	1184.9	1199.8	1200.4	1205.1	1206.3	1198.0	1205.7	1196.2	1205.1	1218.8
20°	1113.4	1114.6	1126.5	1124.7	1131.9	1128.3	1116.4	1124.1	1114.6	1124.7	1135.4
22.5°	1031.2	1041.3	1047.9	1046.7	1056.2	1051.4	1036.5	1040.1	1030.6	1041.9	1048.5
25°	940.6	952.0	956.7	956.7	966.8	965.1	952.0	957.9	949.0	959.7	963.3
27.5°	817.3	831.6	835.2	842.3	859.6	863.2	857.8	869.7	866.2	877.5	876.3
30°	661.8	676.1	681.5	695.8	723.8	740.5	749.4	772.6	778.6	791.7	785.2
32.5°	487.9	499.8	507.5	529.0	565.9	599.9	630.3	664.8	683.3	697.6	685.7
35°	325.3	334.2	342.5	369.3	408.1	450.4	494.4	543.9	575.5	590.9	574.9
37.5°	204.3	210.3	215.6	235.3	266.3	305.6	352.7	409.3	452.7	471.2	451.0
40°	128.1	131.7	134.6	146.5	165.6	189.4	229.4	277.0	321.7	339.0	319.9
42.5°	82.2	84.0	85.8	92.3	102.5	117.4	139.4	169.2	200.2	212.1	199.6
45°	54.2	54.8	55.4	59.0	64.3	71.5	82.8	96.5	111.4	116.2	110.8
47.5°	35.7	35.7	36.3	38.7	41.7	45.9	50.0	53.6	58.4	60.8	57.8
50°	22.6	23.2	23.8	25.6	27.4	29.2	30.4	30.4	31.6	31.6	31.0
52.5°	13.7	13.7	14.3	14.9	17.3	19.1	19.1	17.9	17.9	17.9	17.3
55°	10.1	10.1	10.1	10.7	11.3	11.3	11.3	11.3	11.3	11.3	10.7
57.5°	7.7	7.7	7.7	8.3	8.3	8.3	8.3	7.7	7.7	7.7	7.7
60°	5.4	5.4	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.4
62.5°	4.2	4.2	4.2	4.8	4.8	4.8	4.8	4.8	4.8	4.2	4.2
65°	3.0	3.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
67.5°	2.4	2.4	2.4	2.4	2.4	2.4	3.0	2.4	2.4	2.4	2.4
70°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
72.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
75°	0.6	0.6	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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°	1420.2	1420.2	1420.2	1420.2	1420.2	1420.2	1420.2	1420.2
2.5°	1433.3	1435.1	1408.9	1414.2	1433.3	1414.2	1414.8	1430.3
5°	1438.7	1438.1	1411.2	1417.8	1429.1	1415.4	1416.0	1434.5
7.5°	1426.7	1421.4	1394.6	1402.3	1405.3	1395.8	1395.8	1416.0
10°	1389.8	1380.9	1355.8	1363.6	1358.2	1352.3	1350.5	1370.7
12.5°	1341.6	1331.4	1310.0	1317.1	1304.0	1304.0	1298.7	1317.1
15°	1281.4	1272.4	1257.6	1265.9	1246.2	1250.4	1242.1	1258.7
17.5°	1209.3	1203.3	1195.0	1205.1	1181.9	1189.0	1177.7	1192.0
20°	1126.5	1123.5	1122.3	1132.5	1108.6	1120.5	1107.4	1117.6
22.5°	1040.7	1040.7	1047.3	1061.0	1034.8	1047.9	1032.4	1038.3
25°	956.1	956.7	964.5	974.0	948.4	959.7	942.4	943.0
27.5°	866.2	860.8	869.1	867.4	835.2	841.7	823.3	819.7
30°	767.3	751.2	745.2	728.6	692.2	691.0	672.0	664.8
32.5°	658.9	628.5	610.0	576.1	529.6	518.9	501.6	493.3
35°	538.5	492.7	459.3	414.6	368.7	353.3	339.6	332.4
37.5°	406.3	353.9	315.7	272.8	240.1	227.6	216.2	211.5
40°	277.0	232.3	199.6	171.0	150.7	143.0	136.4	133.4
42.5°	171.0	142.4	123.3	106.0	94.7	90.5	87.6	85.8
45°	97.7	84.6	76.3	66.7	61.4	59.0	57.2	56.0
47.5°	54.2	50.6	47.7	43.5	39.9	38.1	37.5	36.9
50°	30.4	31.0	31.0	28.6	26.8	25.0	23.8	23.2
52.5°	17.9	19.1	19.7	17.9	15.5	14.3	14.3	13.7
55°	11.3	11.3	11.3	11.3	10.7	10.1	10.1	10.1
57.5°	7.7	7.7	8.3	8.3	8.3	7.7	7.7	7.1
60°	6.0	6.0	6.0	6.0	6.0	6.0	5.4	5.4
62.5°	4.8	4.8	4.8	4.8	4.8	4.2	4.2	4.2
65°	3.6	3.6	3.6	3.6	3.6	3.0	3.0	3.0
67.5°	2.4	3.0	2.4	2.4	2.4	2.4	2.4	2.4
70°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
72.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
75°	1.2	1.2	1.2	1.2	1.2	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



Report Generated By E9808895 / USPTCWHP6082093







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









(END OF REPORT)