

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: P136870

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15835 6LSQ1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136870  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23674)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQ6A15D010TE ESQ6A15835 6LSQ1H  
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT  
MEDIUM DISTRIBUTION WITH SEMI-SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 3500K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

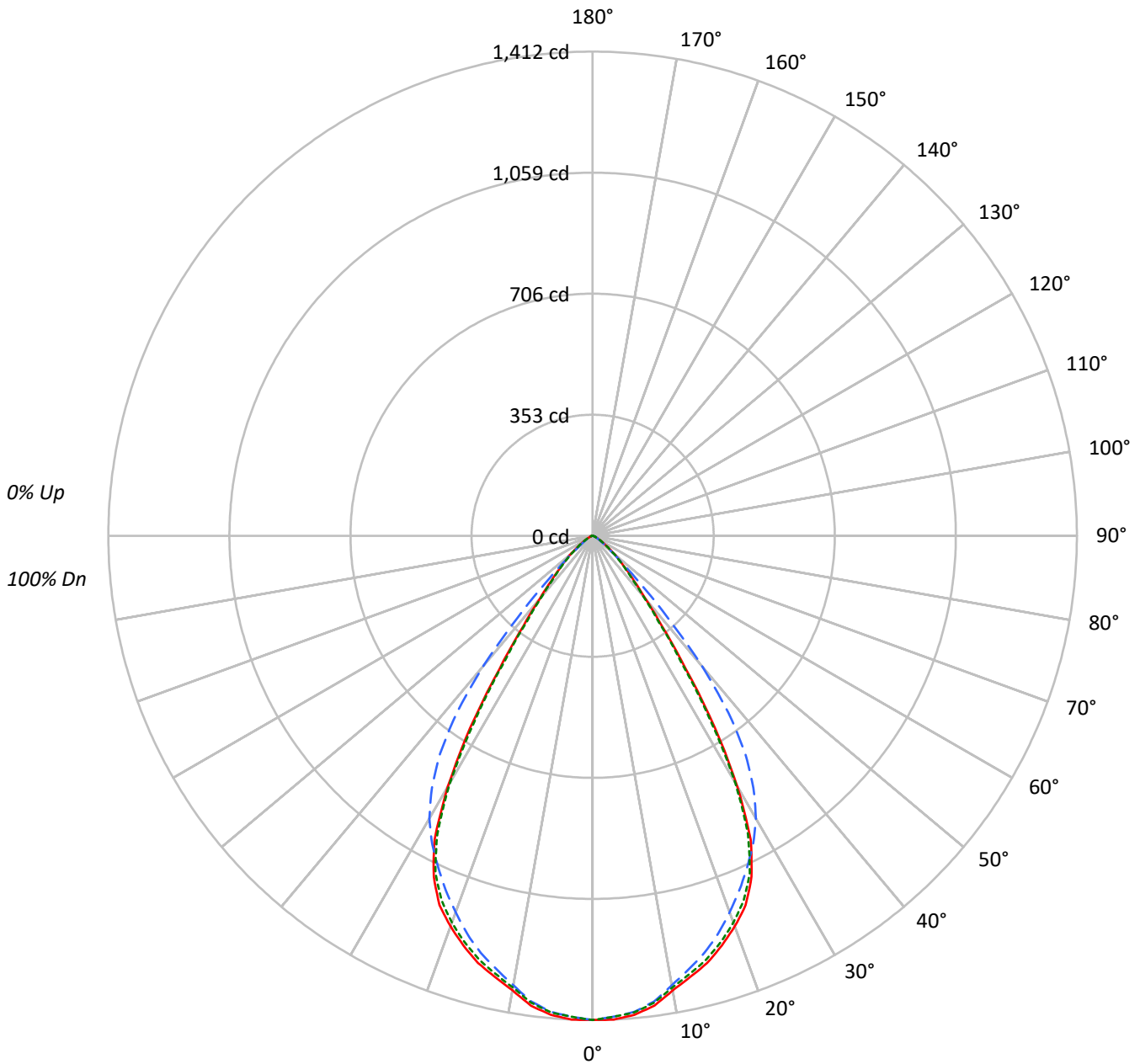
Lumens per Lamp: N/A  
Luminaire Lumens: 1529.0 lumens  
Efficiency: N/A  
Efficacy: 67.7 lumens/watt  
Spacing Criteria (0/90/45): 1.03 / 1.02 / 1.05  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93																			
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85																			
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	86	83	80	79																			
4	96	88	82	77	94	86	81	77	84	80	76	82	78	75	80	77	74	72																			
5	90	81	75	71	89	80	75	70	79	74	70	77	73	69	75	72	68	67																			
6	85	76	70	65	84	75	69	65	74	68	64	72	67	64	71	67	63	62																			
7	81	71	65	60	79	70	64	60	69	64	60	68	63	59	67	62	59	57																			
8	77	66	60	56	75	66	60	56	65	59	55	64	59	55	63	58	55	53																			
9	73	62	56	52	71	62	56	52	61	55	52	60	55	51	59	55	51	50																			
10	69	59	53	49	68	58	52	48	57	52	48	57	52	48	56	51	48	47																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	60803	60803	60803
5°	60599	60232	60305
10°	58847	58182	58480
15°	57501	56142	57046
20°	55528	53507	54987
25°	52091	50642	51526
30°	41941	47340	41349
35°	24893	40772	23731
40°	13450	27760	12787
45°	8372	11679	8062
50°	5573	4548	5231
55°	3310	2425	3183
60°	2049	1610	1903
65°	1212	1039	1212
70°	856	856	642
75°	566	566	566
80°	422	422	422
85°	0	840	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.2	8.6
10°-20°	356.7	23.3
20°-30°	487.9	31.9
30°-40°	369.5	24.2
40°-50°	128.3	8.4
50°-60°	38.4	2.5
60°-70°	12.2	0.8
70°-80°	3.8	0.2
80°-90°	0.9	0.1
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°	975.9	63.8
0°-40°	1345.4	88.0
0°-60°	1512.1	98.9
0°-90°	1529.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1529.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1412	1412	1412	1412	1412	
5°	1402	1397	1394	1395	1395	132
15°	1290	1274	1260	1271	1280	362
25°	1096	1080	1066	1074	1085	491
35°	474	578	776	570	452	308
45°	138	147	192	144	132	112
55°	44	42	32	42	42	42
65°	12	12	10	12	12	13
75°	3	3	3	3	3	3
85°	0	0	2	1	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1412.2	1412.2	1412.2	1412.2	1412.2	1412.2	1412.2	1412.2	1412.2	1412.2	1412.2
2.5°	1412.2	1405.4	1398.7	1403.8	1410.5	1402.1	1403.8	1403.8	1398.7	1403.8	1400.4
5°	1402.1	1397.0	1390.2	1395.3	1400.4	1393.6	1393.6	1393.6	1390.2	1393.6	1391.9
7.5°	1381.7	1374.9	1368.1	1373.2	1378.3	1371.5	1369.8	1371.5	1366.4	1369.8	1368.1
10°	1346.0	1340.9	1334.2	1339.2	1342.6	1334.2	1332.5	1334.2	1327.4	1330.8	1330.8
12.5°	1317.2	1313.8	1305.3	1308.7	1310.4	1301.9	1298.5	1298.5	1291.7	1295.1	1293.4
15°	1290.0	1284.9	1276.4	1278.1	1279.8	1268.0	1264.6	1262.9	1256.1	1259.5	1257.8
17.5°	1252.7	1249.3	1239.1	1240.8	1239.1	1228.9	1222.1	1220.4	1213.6	1217.0	1213.6
20°	1211.9	1206.9	1196.7	1195.0	1191.6	1179.7	1174.6	1172.9	1164.4	1167.8	1166.1
22.5°	1166.1	1159.3	1149.1	1147.4	1144.0	1130.5	1125.4	1122.0	1115.2	1118.6	1115.2
25°	1096.5	1091.4	1082.9	1082.9	1084.6	1076.2	1074.5	1072.8	1064.3	1066.0	1064.3
27.5°	998.1	994.7	991.3	993.0	1001.5	1001.5	1010.0	1013.3	1010.0	1013.3	1010.0
30°	843.6	845.3	855.5	865.7	886.0	901.3	921.7	937.0	943.8	952.2	945.5
32.5°	663.7	658.6	679.0	702.7	735.0	768.9	809.7	841.9	864.0	872.5	862.3
35°	473.6	471.9	490.5	516.0	553.4	602.6	663.7	719.7	758.7	775.7	758.7
37.5°	331.0	332.7	342.9	359.8	388.7	431.1	495.6	565.2	624.6	650.1	621.2
40°	239.3	237.6	244.4	254.6	271.6	298.7	342.9	400.6	460.0	493.9	456.6
42.5°	179.9	178.2	181.6	186.7	195.2	208.8	232.5	263.1	300.4	324.2	295.3
45°	137.5	137.5	137.5	140.9	144.3	149.4	157.9	168.0	181.6	191.8	178.2
47.5°	106.9	106.9	106.9	108.6	110.3	110.3	110.3	108.6	110.3	112.0	108.6
50°	83.2	83.2	83.2	83.2	83.2	81.5	78.1	71.3	69.6	67.9	67.9
52.5°	59.4	59.4	59.4	61.1	62.8	59.4	54.3	49.2	45.8	45.8	45.8
55°	44.1	44.1	44.1	44.1	44.1	40.7	37.3	33.9	32.3	32.3	32.3
57.5°	32.3	32.3	32.3	32.3	30.6	28.9	27.2	25.5	23.8	23.8	23.8
60°	23.8	23.8	23.8	23.8	22.1	20.4	20.4	18.7	18.7	18.7	18.7
62.5°	17.0	17.0	17.0	17.0	17.0	15.3	15.3	13.6	13.6	13.6	13.6
65°	11.9	11.9	11.9	11.9	11.9	11.9	10.2	10.2	10.2	10.2	10.2
67.5°	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
70°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
72.5°	3.4	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
75°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7
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°	1412.2	1412.2	1412.2	1412.2	1412.2	1412.2	1412.2	1412.2
2.5°	1400.4	1408.8	1408.8	1402.1	1397.0	1405.4	1407.1	1403.8
5°	1391.9	1398.7	1398.7	1391.9	1386.8	1397.0	1397.0	1395.3
7.5°	1368.1	1376.6	1374.9	1369.8	1364.7	1373.2	1376.6	1373.2
10°	1330.8	1339.2	1339.2	1334.2	1329.1	1339.2	1340.9	1337.6
12.5°	1295.1	1303.6	1307.0	1301.9	1300.2	1308.7	1312.1	1308.7
15°	1259.5	1269.7	1271.4	1269.7	1269.7	1279.8	1283.2	1279.8
17.5°	1217.0	1227.2	1230.6	1228.9	1230.6	1240.8	1245.9	1242.5
20°	1167.8	1176.3	1179.7	1179.7	1181.4	1195.0	1201.8	1200.1
22.5°	1115.2	1125.4	1130.5	1132.2	1133.9	1147.4	1154.2	1150.8
25°	1066.0	1074.5	1074.5	1074.5	1072.8	1082.9	1088.0	1084.6
27.5°	1006.6	1008.3	1003.2	991.3	982.8	986.2	989.6	981.1
30°	931.9	921.7	903.0	877.6	855.5	847.0	845.3	831.7
32.5°	836.8	808.0	768.9	724.8	685.8	665.4	656.9	641.6
35°	714.6	660.3	599.2	541.5	497.3	475.3	466.8	451.5
37.5°	558.4	490.5	426.0	376.8	348.0	329.3	324.2	315.7
40°	388.7	334.4	292.0	261.4	242.7	234.2	232.5	227.5
42.5°	256.3	225.8	203.7	188.4	179.9	174.8	174.8	171.4
45°	164.6	154.5	147.7	140.9	135.8	134.1	134.1	132.4
47.5°	106.9	108.6	108.6	106.9	103.5	101.8	103.5	101.8
50°	71.3	76.4	79.8	81.5	79.8	78.1	79.8	78.1
52.5°	49.2	54.3	59.4	61.1	59.4	57.7	57.7	57.7
55°	33.9	37.3	40.7	42.4	42.4	42.4	42.4	42.4
57.5°	25.5	27.2	28.9	30.6	32.3	30.6	32.3	30.6
60°	18.7	20.4	22.1	22.1	23.8	23.8	23.8	22.1
62.5°	13.6	15.3	15.3	17.0	17.0	17.0	17.0	17.0
65°	10.2	10.2	11.9	11.9	11.9	11.9	11.9	11.9
67.5°	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
70°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	5.1
72.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	3.4
75°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
85°	1.7	1.7	0.0	1.7	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)