

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: P136868

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15827 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136868
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 ESQ6A15827 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 2700K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1424.0 lumens
Efficiency: N/A
Efficacy: 63.0 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

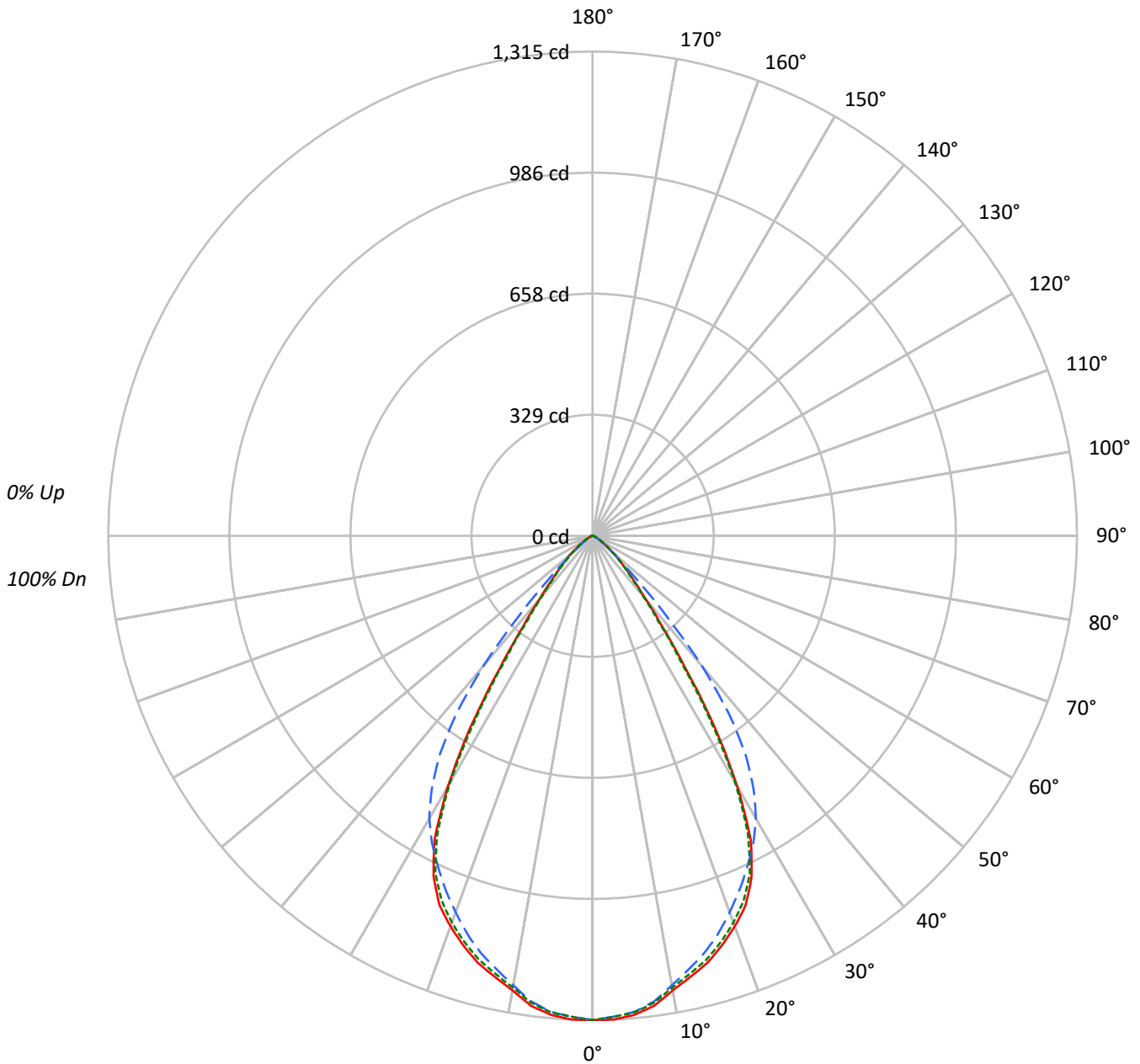
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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	100	100	100
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93	93	93	93
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85	85	85	85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	86	83	80	79	79	79	79
4	96	88	82	77	94	86	81	77	84	80	76	82	78	75	80	77	74	72	72	72	72
5	90	81	75	71	89	80	75	70	79	74	70	77	73	69	75	72	68	67	67	67	67
6	85	76	70	65	84	75	69	65	74	68	64	72	67	64	71	67	63	62	62	62	62
7	81	71	65	60	79	70	64	60	69	64	60	68	63	59	67	62	59	57	57	57	57
8	77	66	60	56	75	66	60	56	65	59	55	64	59	55	63	58	55	53	53	53	53
9	73	62	56	52	71	62	56	52	61	55	52	60	55	51	59	55	51	50	50	50	50
10	69	59	53	49	68	58	52	48	57	52	48	57	52	48	56	51	48	47	47	47	47

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	56631	56631	56631
5°	56437	56095	56160
10°	54807	54186	54462
15°	53552	52286	53133
20°	51716	49833	51212
25°	48514	47165	47991
30°	39062	44088	38510
35°	23185	37970	22102
40°	12528	25854	11904
45°	7794	10875	7508
50°	5191	4233	4870
55°	3085	2252	2965
60°	1903	1498	1774
65°	1131	968	1131
70°	793	793	592
75°	532	532	532
80°	397	397	397
85°	0	790	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	8.6
10°-20°	332.2	23.3
20°-30°	454.4	31.9
30°-40°	344.1	24.2
40°-50°	119.5	8.4
50°-60°	35.8	2.5
60°-70°	11.3	0.8
70°-80°	3.5	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°	908.9	63.8
0°-40°	1253.0	88.0
0°-60°	1408.3	98.9
0°-90°	1424.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1424.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1315	1315	1315	1315	1315	
5°	1306	1301	1298	1299	1299	123
15°	1201	1186	1173	1183	1192	337
25°	1021	1006	993	1001	1010	458
35°	441	538	722	531	420	287
45°	128	137	179	134	123	104
55°	41	40	30	39	40	39
65°	11	11	10	11	11	12
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°	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3
2.5°	1315.3	1308.9	1302.6	1307.4	1313.7	1305.8	1307.4	1307.4	1302.6	1307.4	1304.2
5°	1305.8	1301.0	1294.7	1299.4	1304.2	1297.9	1297.9	1297.9	1294.7	1297.9	1296.3
7.5°	1286.8	1280.5	1274.2	1278.9	1283.6	1277.3	1275.7	1277.3	1272.6	1275.7	1274.2
10°	1253.6	1248.9	1242.5	1247.3	1250.4	1242.5	1241.0	1242.5	1236.2	1239.4	1239.4
12.5°	1226.7	1223.6	1215.7	1218.8	1220.4	1212.5	1209.3	1209.3	1203.0	1206.2	1204.6
15°	1201.4	1196.7	1188.8	1190.4	1192.0	1180.9	1177.7	1176.1	1169.8	1173.0	1171.4
17.5°	1166.7	1163.5	1154.0	1155.6	1154.0	1144.5	1138.2	1136.6	1130.3	1133.5	1130.3
20°	1128.7	1124.0	1114.5	1112.9	1109.7	1098.7	1093.9	1092.4	1084.5	1087.6	1086.0
22.5°	1086.0	1079.7	1070.2	1068.6	1065.5	1052.8	1048.1	1044.9	1038.6	1041.8	1038.6
25°	1021.2	1016.5	1008.6	1008.6	1010.2	1002.3	1000.7	999.1	991.2	992.8	991.2
27.5°	929.5	926.4	923.2	924.8	932.7	932.7	940.6	943.8	940.6	943.8	940.6
30°	785.7	787.3	796.7	806.2	825.2	839.4	858.4	872.6	878.9	886.8	880.5
32.5°	618.1	613.4	632.3	654.5	684.5	716.1	754.1	784.1	804.6	812.6	803.1
35°	441.1	439.5	456.9	480.6	515.4	561.2	618.1	670.3	706.6	722.4	706.6
37.5°	308.3	309.8	319.3	335.1	362.0	401.5	461.6	526.4	581.7	605.5	578.6
40°	222.9	221.3	227.6	237.1	252.9	278.2	319.3	373.1	428.4	460.0	425.2
42.5°	167.6	166.0	169.1	173.9	181.8	194.4	216.6	245.0	279.8	301.9	275.1
45°	128.0	128.0	128.0	131.2	134.4	139.1	147.0	156.5	169.1	178.6	166.0
47.5°	99.6	99.6	99.6	101.2	102.8	102.8	102.8	101.2	102.8	104.3	101.2
50°	77.5	77.5	77.5	77.5	77.5	75.9	72.7	66.4	64.8	63.2	63.2
52.5°	55.3	55.3	55.3	56.9	58.5	55.3	50.6	45.8	42.7	42.7	42.7
55°	41.1	41.1	41.1	41.1	41.1	37.9	34.8	31.6	30.0	30.0	30.0
57.5°	30.0	30.0	30.0	30.0	28.5	26.9	25.3	23.7	22.1	22.1	22.1
60°	22.1	22.1	22.1	22.1	20.6	19.0	19.0	17.4	17.4	17.4	17.4
62.5°	15.8	15.8	15.8	15.8	15.8	14.2	14.2	12.6	12.6	12.6	12.6
65°	11.1	11.1	11.1	11.1	11.1	11.1	9.5	9.5	9.5	9.5	9.5
67.5°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
70°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
72.5°	3.2	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
75°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
77.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
80°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	0.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6
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°	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3	1315.3
2.5°	1304.2	1312.1	1312.1	1305.8	1301.0	1308.9	1310.5	1307.4
5°	1296.3	1302.6	1302.6	1296.3	1291.5	1301.0	1301.0	1299.4
7.5°	1274.2	1282.1	1280.5	1275.7	1271.0	1278.9	1282.1	1278.9
10°	1239.4	1247.3	1247.3	1242.5	1237.8	1247.3	1248.9	1245.7
12.5°	1206.2	1214.1	1217.2	1212.5	1210.9	1218.8	1222.0	1218.8
15°	1173.0	1182.5	1184.0	1182.5	1182.5	1192.0	1195.1	1192.0
17.5°	1133.5	1142.9	1146.1	1144.5	1146.1	1155.6	1160.3	1157.2
20°	1087.6	1095.5	1098.7	1098.7	1100.3	1112.9	1119.2	1117.7
22.5°	1038.6	1048.1	1052.8	1054.4	1056.0	1068.6	1075.0	1071.8
25°	992.8	1000.7	1000.7	1000.7	999.1	1008.6	1013.3	1010.2
27.5°	937.4	939.0	934.3	923.2	915.3	918.5	921.6	913.7
30°	867.9	858.4	841.0	817.3	796.7	788.8	787.3	774.6
32.5°	779.4	752.5	716.1	675.0	638.7	619.7	611.8	597.6
35°	665.5	614.9	558.0	504.3	463.2	442.6	434.7	420.5
37.5°	520.1	456.9	396.8	350.9	324.1	306.7	301.9	294.0
40°	362.0	311.4	271.9	243.4	226.1	218.2	216.6	211.8
42.5°	238.7	210.3	189.7	175.5	167.6	162.8	162.8	159.7
45°	153.3	143.9	137.5	131.2	126.5	124.9	124.9	123.3
47.5°	99.6	101.2	101.2	99.6	96.4	94.9	96.4	94.9
50°	66.4	71.1	74.3	75.9	74.3	72.7	74.3	72.7
52.5°	45.8	50.6	55.3	56.9	55.3	53.7	53.7	53.7
55°	31.6	34.8	37.9	39.5	39.5	39.5	39.5	39.5
57.5°	23.7	25.3	26.9	28.5	30.0	28.5	30.0	28.5
60°	17.4	19.0	20.6	20.6	22.1	22.1	22.1	20.6
62.5°	12.6	14.2	14.2	15.8	15.8	15.8	15.8	15.8
65°	9.5	9.5	11.1	11.1	11.1	11.1	11.1	11.1
67.5°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
70°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	4.7
72.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	3.2
75°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
77.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
80°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	1.6	1.6	0.0	1.6	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)