

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: P136872

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15927 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136872
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 ESQ6A15927 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: 1311.5 lumens
Efficiency: N/A
Efficacy: 58.0 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

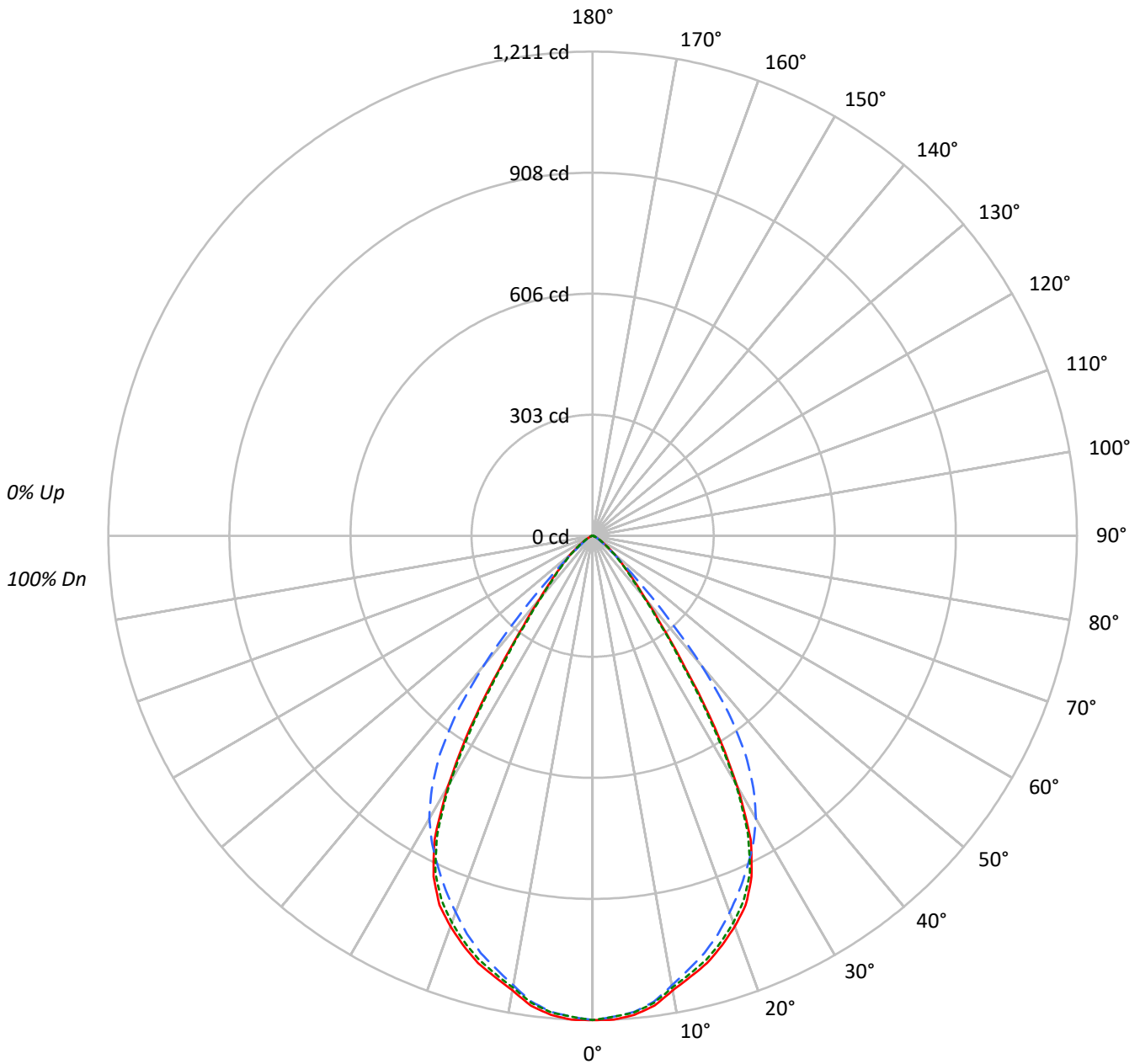
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	52158	52158	52158
5°	51977	51665	51722
10°	50479	49906	50160
15°	49322	48154	48934
20°	47629	45897	47166
25°	44680	43440	44200
30°	35975	40603	35468
35°	21356	34969	20357
40°	11539	23814	10966
45°	7179	10016	6917
50°	4783	3898	4488
55°	2845	2072	2732
60°	1757	1378	1636
65°	1039	886	1039
70°	730	730	541
75°	482	482	482
80°	372	372	372
85°	0	741	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.6	8.6
10°-20°	306.0	23.3
20°-30°	418.5	31.9
30°-40°	317.0	24.2
40°-50°	110.0	8.4
50°-60°	32.9	2.5
60°-70°	10.5	0.8
70°-80°	3.2	0.2
80°-90°	0.8	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°	837.1	63.8
0°-40°	1154.0	88.0
0°-60°	1297.0	98.9
0°-90°	1311.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1311.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1211	1211	1211	1211	1211	
5°	1203	1198	1195	1197	1197	113
15°	1106	1093	1080	1090	1098	311
25°	940	927	914	922	930	422
35°	406	496	665	489	387	264
45°	118	126	164	124	114	96
55°	38	36	28	36	36	36
65°	10	10	9	10	10	11
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°	1211.4	1211.4	1211.4	1211.4	1211.4	1211.4	1211.4	1211.4	1211.4	1211.4	1211.4
2.5°	1211.4	1205.5	1199.7	1204.1	1209.9	1202.6	1204.1	1204.1	1199.7	1204.1	1201.2
5°	1202.6	1198.2	1192.4	1196.7	1201.2	1195.4	1195.4	1195.4	1192.4	1195.4	1193.9
7.5°	1185.1	1179.3	1173.5	1177.9	1182.2	1176.4	1174.9	1176.4	1172.1	1174.9	1173.5
10°	1154.6	1150.2	1144.3	1148.8	1151.6	1144.3	1143.0	1144.3	1138.5	1141.5	1141.5
12.5°	1129.8	1126.9	1119.7	1122.5	1124.0	1116.7	1113.8	1113.8	1108.0	1110.9	1109.4
15°	1106.5	1102.2	1094.9	1096.4	1097.8	1087.6	1084.7	1083.2	1077.4	1080.3	1078.9
17.5°	1074.5	1071.6	1062.8	1064.3	1062.8	1054.1	1048.3	1046.8	1041.0	1044.0	1041.0
20°	1039.5	1035.2	1026.5	1025.0	1022.0	1011.9	1007.5	1006.1	998.8	1001.7	1000.2
22.5°	1000.2	994.4	985.7	984.2	981.3	969.6	965.3	962.4	956.6	959.5	956.6
25°	940.5	936.2	928.9	928.9	930.4	923.1	921.6	920.2	912.9	914.4	912.9
27.5°	856.1	853.2	850.3	851.7	859.0	859.0	866.3	869.2	866.3	869.2	866.3
30°	723.6	725.1	733.8	742.5	760.0	773.1	790.6	803.7	809.5	816.7	810.9
32.5°	569.3	564.9	582.3	602.8	630.4	659.5	694.5	722.2	741.0	748.4	739.7
35°	406.3	404.8	420.8	442.6	474.7	516.9	569.3	617.3	650.8	665.3	650.8
37.5°	283.9	285.3	294.1	308.6	333.4	369.8	425.1	484.8	535.7	557.7	532.9
40°	205.3	203.8	209.6	218.4	232.9	256.2	294.1	343.6	394.6	423.7	391.6
42.5°	154.4	152.9	155.7	160.2	167.4	179.0	199.5	225.6	257.7	278.0	253.4
45°	117.9	117.9	117.9	120.8	123.8	128.1	135.4	144.1	155.7	164.5	152.9
47.5°	91.7	91.7	91.7	93.2	94.7	94.7	94.7	93.2	94.7	96.1	93.2
50°	71.4	71.4	71.4	71.4	71.4	69.9	67.0	61.2	59.7	58.2	58.2
52.5°	50.9	50.9	50.9	52.4	53.9	50.9	46.6	42.2	39.3	39.3	39.3
55°	37.9	37.9	37.9	37.9	37.9	34.9	32.1	29.1	27.6	27.6	27.6
57.5°	27.6	27.6	27.6	27.6	26.2	24.8	23.3	21.8	20.4	20.4	20.4
60°	20.4	20.4	20.4	20.4	19.0	17.5	17.5	16.0	16.0	16.0	16.0
62.5°	14.6	14.6	14.6	14.6	14.6	13.1	13.1	11.6	11.6	11.6	11.6
65°	10.2	10.2	10.2	10.2	10.2	10.2	8.7	8.7	8.7	8.7	8.7
67.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
70°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
72.5°	2.9	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
75°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
82.5°	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5
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°	1211.4	1211.4	1211.4	1211.4	1211.4	1211.4	1211.4	1211.4
2.5°	1201.2	1208.4	1208.4	1202.6	1198.2	1205.5	1207.0	1204.1
5°	1193.9	1199.7	1199.7	1193.9	1189.5	1198.2	1198.2	1196.7
7.5°	1173.5	1180.8	1179.3	1174.9	1170.6	1177.9	1180.8	1177.9
10°	1141.5	1148.8	1148.8	1144.3	1140.0	1148.8	1150.2	1147.3
12.5°	1110.9	1118.2	1121.0	1116.7	1115.2	1122.5	1125.5	1122.5
15°	1080.3	1089.1	1090.5	1089.1	1089.1	1097.8	1100.7	1097.8
17.5°	1044.0	1052.6	1055.6	1054.1	1055.6	1064.3	1068.6	1065.8
20°	1001.7	1009.0	1011.9	1011.9	1013.4	1025.0	1030.8	1029.4
22.5°	956.6	965.3	969.6	971.1	972.6	984.2	990.1	987.1
25°	914.4	921.6	921.6	921.6	920.2	928.9	933.2	930.4
27.5°	863.3	864.8	860.5	850.3	843.0	845.9	848.8	841.5
30°	799.3	790.6	774.6	752.7	733.8	726.5	725.1	713.4
32.5°	717.8	693.1	659.5	621.7	588.2	570.7	563.5	550.4
35°	612.9	566.3	513.9	464.5	426.6	407.6	400.4	387.3
37.5°	479.0	420.8	365.5	323.2	298.5	282.5	278.0	270.8
40°	333.4	286.8	250.4	224.2	208.2	201.0	199.5	195.1
42.5°	219.8	193.7	174.7	161.6	154.4	149.9	149.9	147.1
45°	141.2	132.5	126.6	120.8	116.5	115.0	115.0	113.6
47.5°	91.7	93.2	93.2	91.7	88.8	87.4	88.8	87.4
50°	61.2	65.5	68.4	69.9	68.4	67.0	68.4	67.0
52.5°	42.2	46.6	50.9	52.4	50.9	49.5	49.5	49.5
55°	29.1	32.1	34.9	36.4	36.4	36.4	36.4	36.4
57.5°	21.8	23.3	24.8	26.2	27.6	26.2	27.6	26.2
60°	16.0	17.5	19.0	19.0	20.4	20.4	20.4	19.0
62.5°	11.6	13.1	13.1	14.6	14.6	14.6	14.6	14.6
65°	8.7	8.7	10.2	10.2	10.2	10.2	10.2	10.2
67.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
70°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	4.3
72.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	2.9
75°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
82.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
85°	1.5	1.5	0.0	1.5	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)