

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: P136727

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10940 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136727
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 ESQ6A10940 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: 1177.9 lumens
Efficiency: N/A
Efficacy: 84.1 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

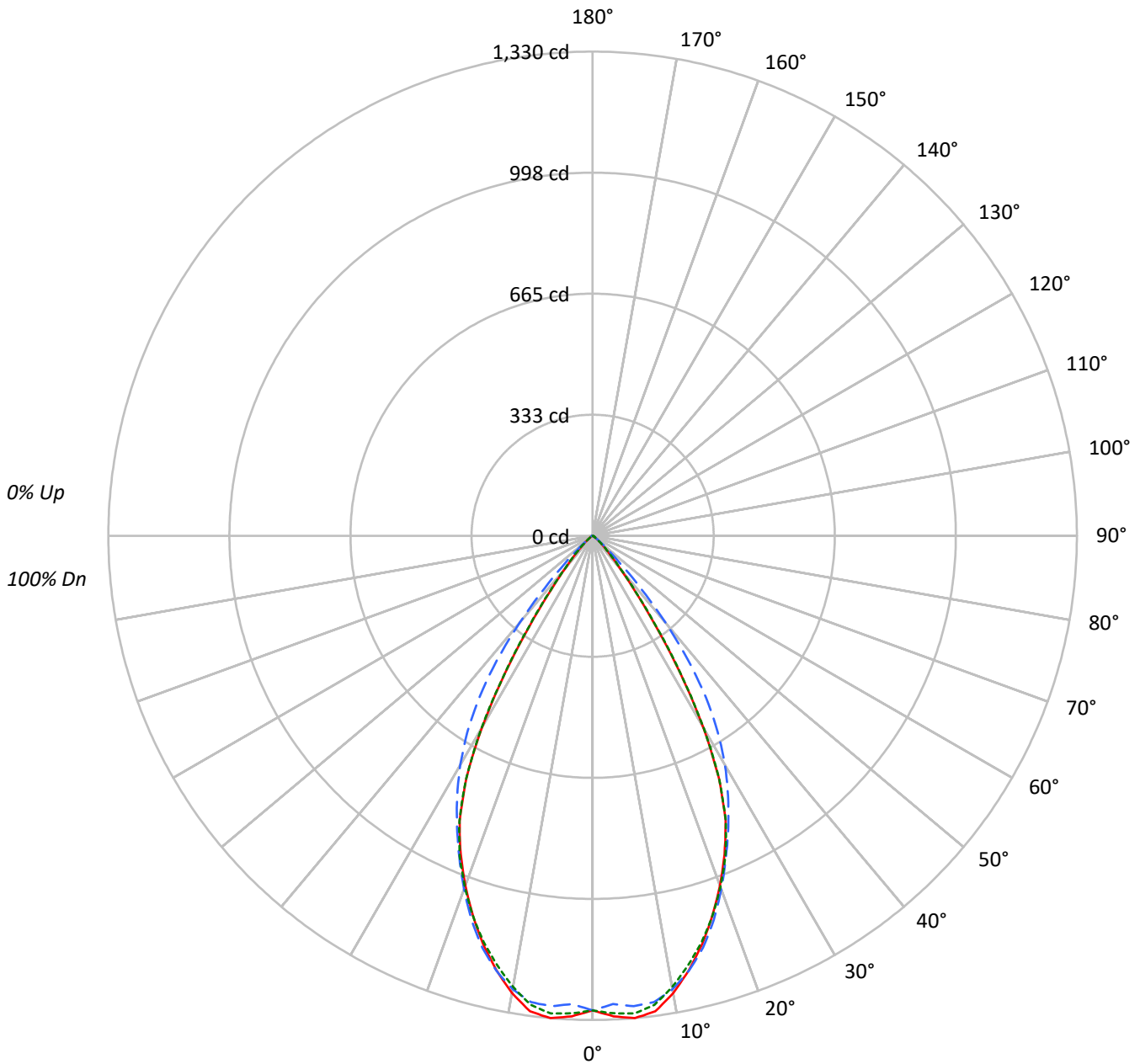
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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																			
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°	66801	66801	66801
5°	68409	66717	67736
10°	66354	65813	65470
15°	61615	62140	61296
20°	55733	56300	55946
25°	48820	49809	48944
30°	35944	43002	36109
35°	18678	33928	19085
40°	7866	20816	8194
45°	3609	7732	3725
50°	1650	2312	1698
55°	831	929	831
60°	512	564	512
65°	339	400	339
70°	255	255	255
75°	119	218	119
80°	177	177	177
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.4	10.5
10°-20°	324.4	27.5
20°-30°	396.6	33.7
30°-40°	254.9	21.6
40°-50°	63.6	5.4
50°-60°	10.6	0.9
60°-70°	3.3	0.3
70°-80°	1.0	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°	844.3	71.7
0°-40°	1099.2	93.3
0°-60°	1173.4	99.6
0°-90°	1177.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1177.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1304	1304	1304	1304	1304	
5°	1330	1302	1297	1298	1317	125
15°	1162	1168	1171	1158	1156	324
25°	864	887	881	890	866	385
35°	299	394	542	401	305	197
45°	50	62	107	66	51	43
55°	9	10	10	10	9	9
65°	3	3	3	3	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°	1303.7	1303.7	1303.7	1303.7	1303.7	1303.7	1303.7	1303.7	1303.7	1303.7	1303.7
2.5°	1321.2	1288.4	1314.1	1311.9	1290.1	1294.5	1298.2	1297.7	1297.1	1287.3	1310.3
5°	1330.0	1296.6	1322.8	1319.6	1299.3	1303.7	1305.9	1307.0	1304.3	1297.1	1319.1
7.5°	1317.4	1286.2	1311.4	1307.6	1291.7	1295.5	1297.1	1299.9	1296.0	1292.3	1313.0
10°	1275.3	1249.0	1272.5	1269.9	1259.4	1263.8	1264.9	1269.3	1264.9	1264.9	1283.5
12.5°	1221.7	1201.5	1222.8	1220.6	1216.8	1221.7	1220.0	1227.7	1221.1	1223.3	1240.3
15°	1161.5	1148.4	1166.0	1165.4	1166.0	1169.7	1164.9	1170.3	1164.3	1171.4	1186.1
17.5°	1093.7	1087.7	1101.4	1102.0	1106.3	1107.4	1099.8	1106.8	1098.1	1106.3	1118.9
20°	1022.1	1023.2	1034.1	1032.5	1039.1	1035.8	1024.9	1031.9	1023.2	1032.5	1042.3
22.5°	946.6	955.9	962.0	960.9	969.6	965.2	951.5	954.8	946.1	956.5	962.5
25°	863.5	873.9	878.3	878.3	887.5	886.0	873.9	879.4	871.2	881.0	884.3
27.5°	750.3	763.4	766.7	773.2	789.1	792.4	787.5	798.4	795.2	805.5	804.4
30°	607.5	620.7	625.6	638.7	664.4	679.8	687.9	709.2	714.8	726.8	720.8
32.5°	447.9	458.8	465.9	485.6	519.5	550.7	578.6	610.3	627.3	640.4	629.5
35°	298.6	306.8	314.4	339.0	374.6	413.5	453.9	499.3	528.3	542.4	527.8
37.5°	187.5	193.1	197.9	216.0	244.5	280.5	323.8	375.7	415.6	432.6	414.0
40°	117.6	120.9	123.6	134.5	152.0	173.9	210.6	254.3	295.3	311.2	293.7
42.5°	75.5	77.1	78.8	84.7	94.1	107.8	128.0	155.3	183.8	194.7	183.2
45°	49.8	50.3	50.9	54.2	59.0	65.6	76.0	88.6	102.3	106.7	101.7
47.5°	32.8	32.8	33.3	35.5	38.3	42.1	45.9	49.2	53.6	55.8	53.1
50°	20.7	21.3	21.8	23.5	25.2	26.8	27.9	27.9	29.0	29.0	28.5
52.5°	12.6	12.6	13.1	13.7	15.9	17.5	17.5	16.4	16.4	16.4	15.9
55°	9.3	9.3	9.3	9.8	10.4	10.4	10.4	10.4	10.4	10.4	9.8
57.5°	7.1	7.1	7.1	7.6	7.6	7.6	7.6	7.1	7.1	7.1	7.1
60°	5.0	5.0	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.0
62.5°	3.9	3.9	3.9	4.4	4.4	4.4	4.4	4.4	4.4	3.9	3.9
65°	2.8	2.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
67.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.8	2.2	2.2	2.2	2.2
70°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
72.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
75°	0.6	0.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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



TEST NUMBER: P136727

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1303.7	1303.7	1303.7	1303.7	1303.7	1303.7	1303.7	1303.7
2.5°	1315.8	1317.4	1293.4	1298.2	1315.8	1298.2	1298.8	1313.0
5°	1320.7	1320.2	1295.5	1301.5	1311.9	1299.3	1299.9	1316.9
7.5°	1309.7	1304.8	1280.2	1287.3	1290.1	1281.3	1281.3	1299.9
10°	1275.8	1267.7	1244.6	1251.8	1246.8	1241.4	1239.8	1258.3
12.5°	1231.6	1222.2	1202.6	1209.1	1197.1	1197.1	1192.2	1209.1
15°	1176.3	1168.1	1154.5	1162.1	1144.0	1147.9	1140.2	1155.5
17.5°	1110.1	1104.6	1097.0	1106.3	1085.0	1091.5	1081.1	1094.3
20°	1034.1	1031.4	1030.3	1039.6	1017.7	1028.6	1016.6	1026.0
22.5°	955.4	955.4	961.4	974.0	949.9	962.0	947.7	953.2
25°	877.7	878.3	885.4	894.1	870.6	881.0	865.1	865.7
27.5°	795.2	790.2	797.8	796.3	766.7	772.7	755.8	752.5
30°	704.4	689.6	684.1	668.9	635.4	634.3	616.9	610.3
32.5°	604.9	577.0	560.0	528.9	486.2	476.4	460.5	452.8
35°	494.3	452.3	421.6	380.6	338.5	324.3	311.8	305.1
37.5°	373.0	324.9	289.8	250.4	220.4	208.9	198.5	194.2
40°	254.3	213.3	183.2	157.0	138.3	131.3	125.2	122.5
42.5°	157.0	130.7	113.2	97.3	86.9	83.1	80.4	78.8
45°	89.7	77.7	70.0	61.2	56.4	54.2	52.5	51.4
47.5°	49.8	46.5	43.8	39.9	36.6	35.0	34.4	33.9
50°	27.9	28.5	28.5	26.3	24.6	23.0	21.8	21.3
52.5°	16.4	17.5	18.1	16.4	14.2	13.1	13.1	12.6
55°	10.4	10.4	10.4	10.4	9.8	9.3	9.3	9.3
57.5°	7.1	7.1	7.6	7.6	7.6	7.1	7.1	6.5
60°	5.5	5.5	5.5	5.5	5.5	5.5	5.0	5.0
62.5°	4.4	4.4	4.4	4.4	4.4	3.9	3.9	3.9
65°	3.3	3.3	3.3	3.3	3.3	2.8	2.8	2.8
67.5°	2.2	2.8	2.2	2.2	2.2	2.2	2.2	2.2
70°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
72.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
75°	1.1	1.1	1.1	1.1	1.1	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)