

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: P136726

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10935 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136726
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 ESQ6A10935 6LSQ1LI
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1154.0 lumens
Efficiency: N/A
Efficacy: 82.4 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

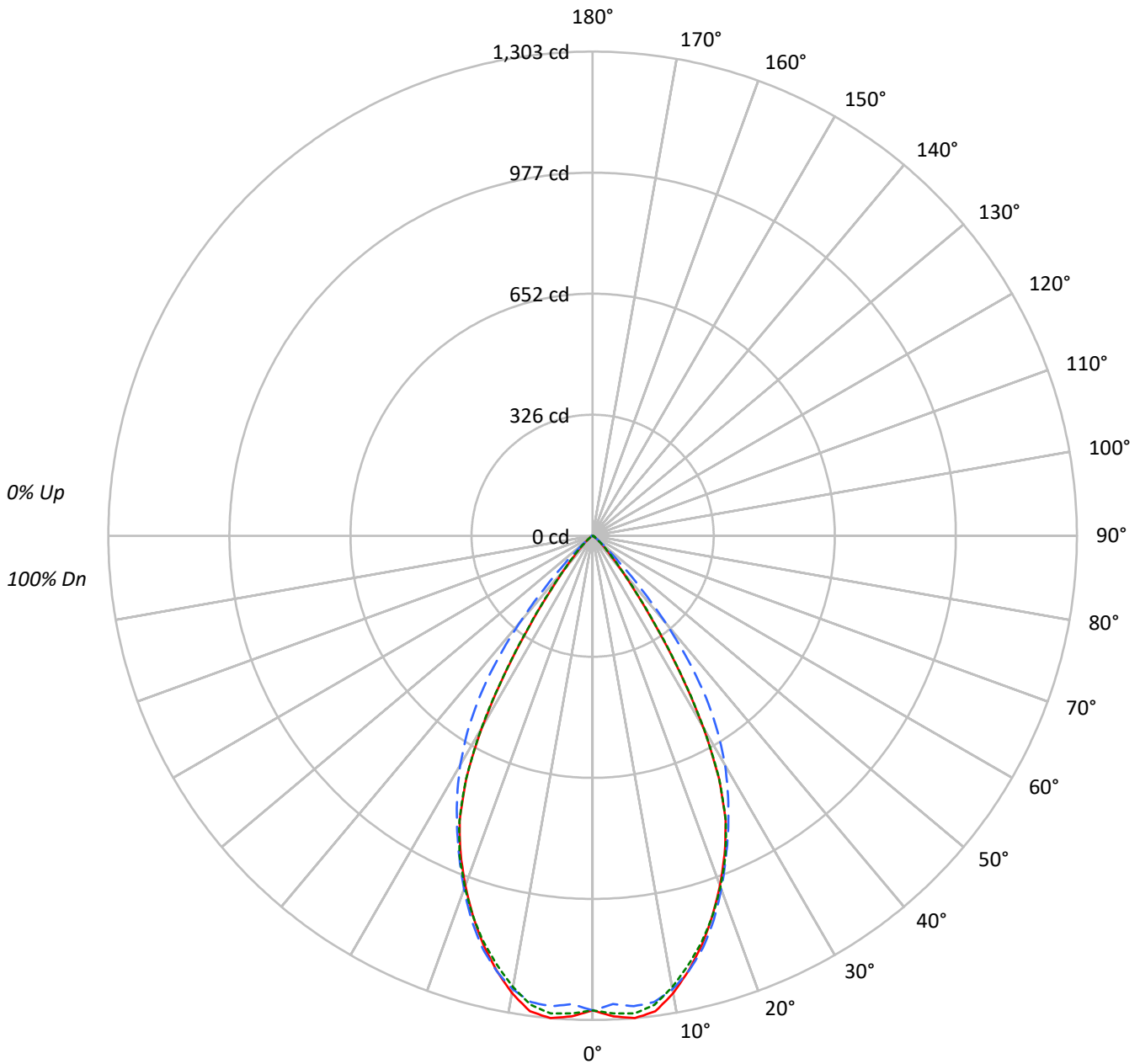
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	65449	65449	65449
5°	67021	65369	66362
10°	65012	64481	64148
15°	60368	60883	60055
20°	54605	55155	54806
25°	47830	48797	47949
30°	35216	42133	35376
35°	18303	33247	18703
40°	7706	20394	8027
45°	3529	7573	3652
50°	1626	2264	1666
55°	813	911	813
60°	502	543	502
65°	327	388	327
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°	120.9	10.5
10°-20°	317.8	27.5
20°-30°	388.5	33.7
30°-40°	249.7	21.6
40°-50°	62.3	5.4
50°-60°	10.4	0.9
60°-70°	3.2	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°	827.2	71.7
0°-40°	1076.9	93.3
0°-60°	1149.6	99.6
0°-90°	1154.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1154.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1277	1277	1277	1277	1277	
5°	1303	1275	1271	1272	1290	123
15°	1138	1144	1148	1135	1132	318
25°	846	869	863	872	848	377
35°	293	386	532	393	299	193
45°	49	61	104	64	50	42
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°	1277.3	1277.3	1277.3	1277.3	1277.3	1277.3	1277.3	1277.3	1277.3	1277.3	1277.3
2.5°	1294.5	1262.3	1287.5	1285.4	1263.9	1268.2	1272.0	1271.4	1270.9	1261.2	1283.7
5°	1303.0	1270.3	1296.0	1292.8	1273.0	1277.3	1279.4	1280.5	1277.9	1270.9	1292.3
7.5°	1290.7	1260.1	1284.8	1281.1	1265.6	1269.3	1270.9	1273.5	1269.8	1266.0	1286.4
10°	1249.5	1223.7	1246.7	1244.1	1233.9	1238.2	1239.3	1243.5	1239.3	1239.3	1257.5
12.5°	1197.0	1177.2	1198.0	1195.9	1192.1	1197.0	1195.3	1202.9	1196.4	1198.5	1215.2
15°	1138.0	1125.2	1142.3	1141.7	1142.3	1146.0	1141.3	1146.6	1140.7	1147.7	1162.1
17.5°	1071.6	1065.7	1079.1	1079.6	1083.9	1085.0	1077.5	1084.4	1075.9	1083.9	1096.2
20°	1001.4	1002.5	1013.2	1011.5	1018.0	1014.8	1004.0	1011.0	1002.5	1011.5	1021.2
22.5°	927.5	936.5	942.4	941.4	949.9	945.6	932.2	935.4	926.9	937.1	943.0
25°	846.0	856.2	860.4	860.4	869.6	868.0	856.2	861.5	853.5	863.1	866.4
27.5°	735.1	748.0	751.2	757.6	773.1	776.4	771.5	782.2	779.0	789.2	788.1
30°	595.2	608.1	612.9	625.8	651.0	666.0	674.0	694.9	700.3	712.1	706.1
32.5°	438.8	449.5	456.5	475.8	509.0	539.5	566.9	597.9	614.5	627.4	616.7
35°	292.6	300.6	308.1	332.2	367.0	405.0	444.7	489.2	517.6	531.5	517.0
37.5°	183.8	189.1	194.0	211.6	239.5	274.8	317.2	368.1	407.2	423.8	405.6
40°	115.2	118.4	121.1	131.8	149.0	170.4	206.3	249.1	289.4	304.9	287.7
42.5°	73.9	75.6	77.1	83.1	92.2	105.6	125.4	152.2	180.0	190.8	179.5
45°	48.7	49.3	49.8	53.1	57.8	64.3	74.4	86.8	100.2	104.5	99.7
47.5°	32.1	32.1	32.7	34.8	37.5	41.2	45.0	48.2	52.5	54.6	52.0
50°	20.4	20.9	21.4	23.0	24.6	26.3	27.4	27.4	28.4	28.4	27.8
52.5°	12.3	12.3	12.9	13.4	15.5	17.2	17.2	16.1	16.1	16.1	15.5
55°	9.1	9.1	9.1	9.6	10.2	10.2	10.2	10.2	10.2	10.2	9.6
57.5°	7.0	7.0	7.0	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0
60°	4.9	4.9	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	4.9
62.5°	3.8	3.8	3.8	4.3	4.3	4.3	4.3	4.3	4.3	3.8	3.8
65°	2.7	2.7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
67.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.7	2.1	2.1	2.1	2.1
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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1277.3	1277.3	1277.3	1277.3	1277.3	1277.3	1277.3	1277.3
2.5°	1289.1	1290.7	1267.1	1272.0	1289.1	1272.0	1272.5	1286.4
5°	1293.9	1293.4	1269.3	1275.2	1285.4	1273.0	1273.5	1290.2
7.5°	1283.2	1278.4	1254.3	1261.2	1263.9	1255.4	1255.4	1273.5
10°	1249.9	1242.0	1219.5	1226.4	1221.6	1216.3	1214.6	1232.9
12.5°	1206.6	1197.4	1178.2	1184.6	1172.8	1172.8	1168.0	1184.6
15°	1152.5	1144.5	1131.1	1138.5	1120.9	1124.6	1117.1	1132.1
17.5°	1087.6	1082.3	1074.8	1083.9	1063.0	1069.5	1059.3	1072.1
20°	1013.2	1010.5	1009.4	1018.5	997.1	1007.8	996.0	1005.1
22.5°	936.0	936.0	941.9	954.3	930.7	942.4	928.6	933.9
25°	859.9	860.4	867.4	876.0	853.0	863.1	847.6	848.1
27.5°	779.0	774.2	781.7	780.1	751.2	757.1	740.5	737.2
30°	690.1	675.6	670.2	655.3	622.6	621.5	604.3	597.9
32.5°	592.6	565.2	548.7	518.1	476.4	466.7	451.1	443.7
35°	484.3	443.1	413.1	372.9	331.7	317.7	305.4	299.0
37.5°	365.4	318.3	283.9	245.4	215.9	204.7	194.5	190.2
40°	249.1	208.9	179.5	153.8	135.6	128.6	122.7	120.0
42.5°	153.8	128.1	110.9	95.4	85.2	81.4	78.8	77.1
45°	87.9	76.1	68.6	60.0	55.2	53.1	51.4	50.4
47.5°	48.7	45.5	42.9	39.1	35.9	34.3	33.8	33.2
50°	27.4	27.8	27.8	25.7	24.1	22.5	21.4	20.9
52.5°	16.1	17.2	17.7	16.1	14.0	12.9	12.9	12.3
55°	10.2	10.2	10.2	10.2	9.6	9.1	9.1	9.1
57.5°	7.0	7.0	7.5	7.5	7.5	7.0	7.0	6.4
60°	5.3	5.3	5.3	5.3	5.3	5.3	4.9	4.9
62.5°	4.3	4.3	4.3	4.3	4.3	3.8	3.8	3.8
65°	3.2	3.2	3.2	3.2	3.2	2.7	2.7	2.7
67.5°	2.1	2.7	2.1	2.1	2.1	2.1	2.1	2.1
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)