

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: P136873

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15930 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136873
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 ESQ6A15930 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 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1373.3 lumens
Efficiency: N/A
Efficacy: 60.8 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

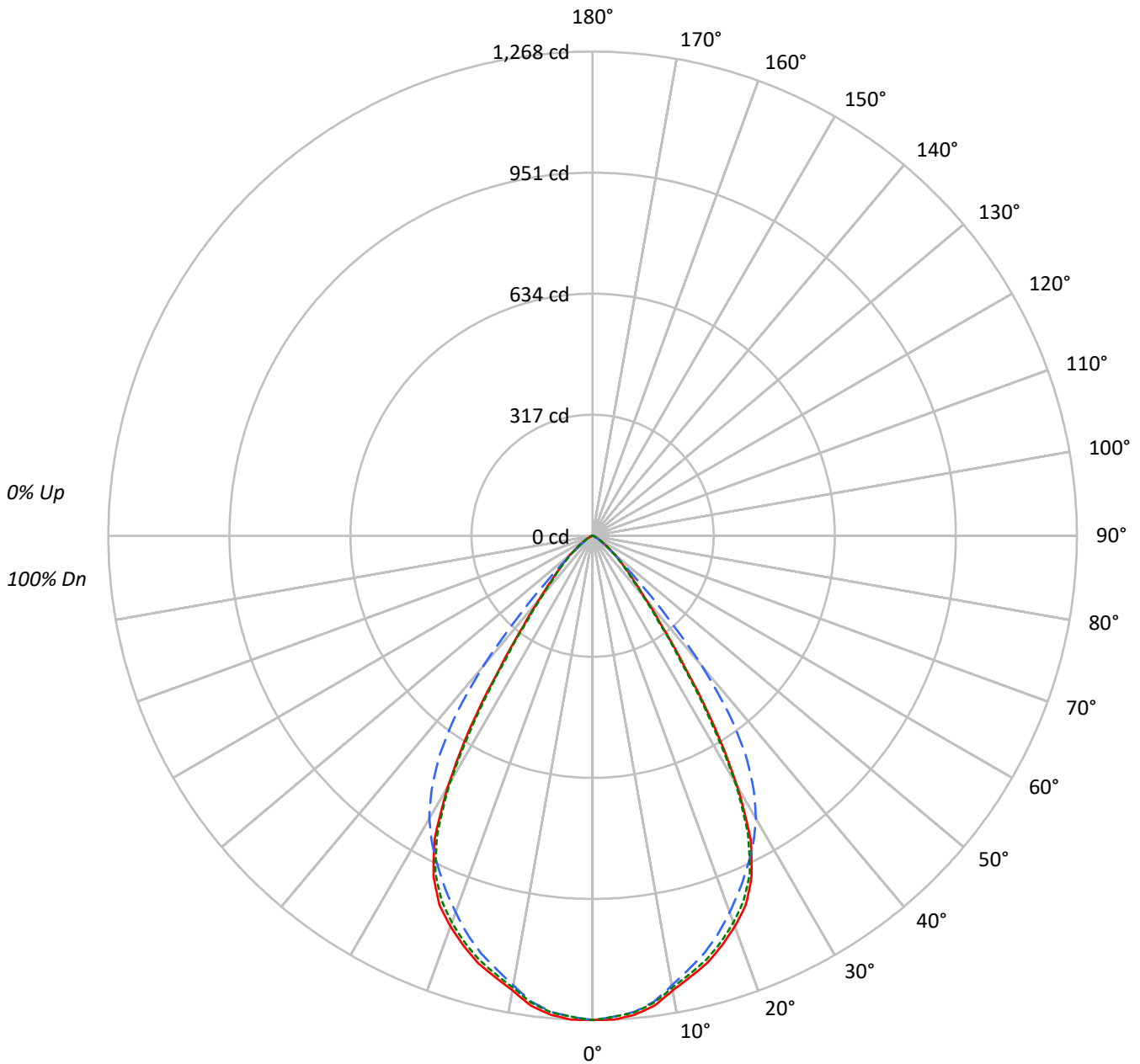
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	54607	54607	54607
5°	54423	54090	54159
10°	52853	52254	52521
15°	51644	50423	51234
20°	49869	48055	49384
25°	46785	45483	46276
30°	37665	42517	37138
35°	22354	36614	21314
40°	12084	24933	11483
45°	7520	10485	7240
50°	5004	4086	4695
55°	2973	2169	2860
60°	1843	1447	1705
65°	1090	927	1090
70°	768	768	579
75°	499	499	499
80°	397	397	397
85°	0	790	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.9	8.6
10°-20°	320.4	23.3
20°-30°	438.2	31.9
30°-40°	331.9	24.2
40°-50°	115.2	8.4
50°-60°	34.5	2.5
60°-70°	10.9	0.8
70°-80°	3.4	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°	876.5	63.8
0°-40°	1208.3	88.0
0°-60°	1358.0	98.9
0°-90°	1373.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1373.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1268	1268	1268	1268	1268	
5°	1259	1255	1252	1253	1253	119
15°	1159	1144	1131	1141	1149	325
25°	985	970	957	965	974	441
35°	425	519	697	512	406	277
45°	124	132	172	130	119	100
55°	40	38	29	37	38	38
65°	11	11	9	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°	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3
2.5°	1268.3	1262.2	1256.2	1260.8	1266.8	1259.2	1260.8	1260.8	1256.2	1260.8	1257.7
5°	1259.2	1254.6	1248.5	1253.1	1257.7	1251.5	1251.5	1251.5	1248.5	1251.5	1250.1
7.5°	1240.9	1234.8	1228.7	1233.3	1237.8	1231.7	1230.3	1231.7	1227.1	1230.3	1228.7
10°	1208.9	1204.3	1198.2	1202.8	1205.9	1198.2	1196.7	1198.2	1192.1	1195.2	1195.2
12.5°	1182.9	1179.9	1172.3	1175.4	1176.9	1169.3	1166.2	1166.2	1160.1	1163.1	1161.7
15°	1158.6	1154.0	1146.4	1147.9	1149.4	1138.7	1135.7	1134.2	1128.1	1131.2	1129.6
17.5°	1125.0	1122.0	1112.8	1114.4	1112.8	1103.7	1097.6	1096.1	1090.0	1093.0	1090.0
20°	1088.4	1083.9	1074.7	1073.2	1070.2	1059.5	1054.9	1053.4	1045.8	1048.8	1047.3
22.5°	1047.3	1041.2	1032.1	1030.5	1027.5	1015.3	1010.7	1007.7	1001.6	1004.6	1001.6
25°	984.8	980.2	972.6	972.6	974.1	966.5	965.0	963.5	955.8	957.4	955.8
27.5°	896.4	893.4	890.2	891.8	899.4	899.4	907.1	910.1	907.1	910.1	907.1
30°	757.6	759.2	768.3	777.5	795.7	809.5	827.8	841.5	847.6	855.2	849.2
32.5°	596.1	591.5	609.8	631.2	660.1	690.6	727.1	756.1	775.9	783.6	774.4
35°	425.3	423.8	440.6	463.4	497.0	541.2	596.1	646.4	681.4	696.6	681.4
37.5°	297.3	298.8	308.0	323.2	349.1	387.2	445.1	507.7	561.0	583.8	557.9
40°	215.0	213.4	219.6	228.7	243.9	268.3	308.0	359.7	413.2	443.6	410.1
42.5°	161.6	160.1	163.1	167.7	175.3	187.5	208.9	236.3	269.9	291.1	265.2
45°	123.5	123.5	123.5	126.5	129.6	134.2	141.7	151.0	163.1	172.2	160.1
47.5°	96.1	96.1	96.1	97.5	99.1	99.1	99.1	97.5	99.1	100.6	97.5
50°	74.7	74.7	74.7	74.7	74.7	73.2	70.1	64.0	62.5	61.0	61.0
52.5°	53.3	53.3	53.3	54.9	56.4	53.3	48.8	44.2	41.2	41.2	41.2
55°	39.6	39.6	39.6	39.6	39.6	36.6	33.5	30.5	28.9	28.9	28.9
57.5°	28.9	28.9	28.9	28.9	27.4	25.9	24.4	22.8	21.4	21.4	21.4
60°	21.4	21.4	21.4	21.4	19.8	18.3	18.3	16.8	16.8	16.8	16.8
62.5°	15.3	15.3	15.3	15.3	15.3	13.7	13.7	12.2	12.2	12.2	12.2
65°	10.7	10.7	10.7	10.7	10.7	10.7	9.1	9.1	9.1	9.1	9.1
67.5°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
70°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
72.5°	3.0	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
75°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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°	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3
2.5°	1257.7	1265.3	1265.3	1259.2	1254.6	1262.2	1263.8	1260.8
5°	1250.1	1256.2	1256.2	1250.1	1245.5	1254.6	1254.6	1253.1
7.5°	1228.7	1236.4	1234.8	1230.3	1225.7	1233.3	1236.4	1233.3
10°	1195.2	1202.8	1202.8	1198.2	1193.6	1202.8	1204.3	1201.3
12.5°	1163.1	1170.8	1173.8	1169.3	1167.7	1175.4	1178.4	1175.4
15°	1131.2	1140.3	1141.9	1140.3	1140.3	1149.4	1152.4	1149.4
17.5°	1093.0	1102.2	1105.2	1103.7	1105.2	1114.4	1118.9	1115.9
20°	1048.8	1056.5	1059.5	1059.5	1061.0	1073.2	1079.3	1077.8
22.5°	1001.6	1010.7	1015.3	1016.8	1018.3	1030.5	1036.6	1033.5
25°	957.4	965.0	965.0	965.0	963.5	972.6	977.2	974.1
27.5°	904.0	905.5	900.9	890.2	882.7	885.7	888.8	881.1
30°	836.9	827.8	811.0	788.1	768.3	760.7	759.2	747.0
32.5°	751.5	725.7	690.6	651.0	615.9	597.5	590.0	576.3
35°	641.8	593.0	538.1	486.3	446.7	426.9	419.2	405.5
37.5°	501.6	440.6	382.7	338.5	312.5	295.7	291.1	283.6
40°	349.1	300.3	262.2	234.8	218.0	210.4	208.9	204.3
42.5°	230.2	202.7	182.9	169.2	161.6	157.0	157.0	154.0
45°	147.9	138.7	132.6	126.5	121.9	120.5	120.5	118.9
47.5°	96.1	97.5	97.5	96.1	93.0	91.5	93.0	91.5
50°	64.0	68.6	71.7	73.2	71.7	70.1	71.7	70.1
52.5°	44.2	48.8	53.3	54.9	53.3	51.9	51.9	51.9
55°	30.5	33.5	36.6	38.1	38.1	38.1	38.1	38.1
57.5°	22.8	24.4	25.9	27.4	28.9	27.4	28.9	27.4
60°	16.8	18.3	19.8	19.8	21.4	21.4	21.4	19.8
62.5°	12.2	13.7	13.7	15.3	15.3	15.3	15.3	15.3
65°	9.1	9.1	10.7	10.7	10.7	10.7	10.7	10.7
67.5°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
70°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	4.6
72.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	3.0
75°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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)