

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: P136874

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15935 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136874
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 ESQ6A15935 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 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1408.3 lumens
Efficiency: N/A
Efficacy: 62.3 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

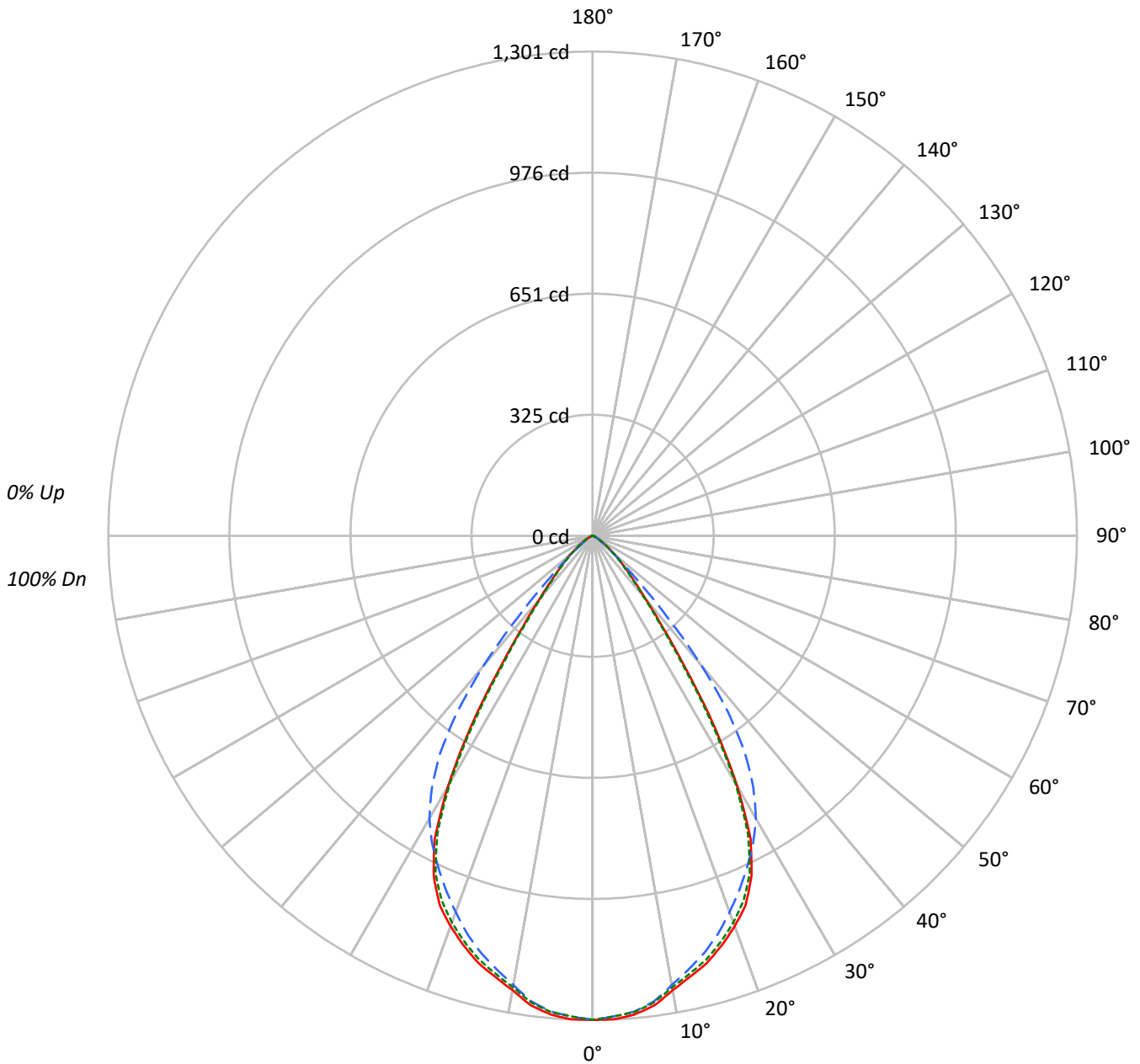
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	55998	55998	55998
5°	55810	55473	55542
10°	54200	53587	53858
15°	52959	51706	52540
20°	51143	49278	50644
25°	47977	46642	47454
30°	38630	43601	38083
35°	22927	37550	21855
40°	12388	25568	11775
45°	7709	10753	7422
50°	5131	4186	4816
55°	3048	2229	2935
60°	1886	1481	1757
65°	1121	958	1121
70°	793	793	592
75°	516	516	516
80°	397	397	397
85°	0	790	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.9	8.6
10°-20°	328.6	23.3
20°-30°	449.4	31.9
30°-40°	340.3	24.2
40°-50°	118.1	8.4
50°-60°	35.4	2.5
60°-70°	11.2	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°	898.8	63.8
0°-40°	1239.1	88.0
0°-60°	1392.7	98.9
0°-90°	1408.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1408.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1301	1301	1301	1301	1301	
5°	1291	1287	1284	1285	1285	122
15°	1188	1173	1160	1170	1179	334
25°	1010	995	982	990	999	453
35°	436	532	714	525	416	284
45°	127	135	177	133	122	103
55°	41	39	30	38	39	39
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°	1300.6	1300.6	1300.6	1300.6	1300.6	1300.6	1300.6	1300.6	1300.6	1300.6	1300.6
2.5°	1300.6	1294.4	1288.2	1292.9	1299.1	1291.3	1292.9	1292.9	1288.2	1292.9	1289.8
5°	1291.3	1286.6	1280.4	1285.1	1289.8	1283.5	1283.5	1283.5	1280.4	1283.5	1281.9
7.5°	1272.5	1266.3	1260.0	1264.7	1269.4	1263.2	1261.6	1263.2	1258.5	1261.6	1260.0
10°	1239.7	1235.0	1228.8	1233.4	1236.5	1228.8	1227.2	1228.8	1222.5	1225.7	1225.7
12.5°	1213.1	1210.0	1202.2	1205.3	1206.9	1199.0	1195.9	1195.9	1189.7	1192.8	1191.2
15°	1188.1	1183.4	1175.6	1177.1	1178.7	1167.8	1164.7	1163.1	1156.9	1160.0	1158.4
17.5°	1153.7	1150.6	1141.2	1142.8	1141.2	1131.8	1125.6	1124.0	1117.7	1120.9	1117.7
20°	1116.2	1111.6	1102.2	1100.6	1097.5	1086.5	1081.8	1080.2	1072.4	1075.5	1074.0
22.5°	1074.0	1067.7	1058.3	1056.8	1053.6	1041.2	1036.5	1033.4	1027.1	1030.2	1027.1
25°	1009.9	1005.2	997.4	997.4	998.9	991.2	989.6	988.0	980.2	981.8	980.2
27.5°	919.3	916.1	913.0	914.6	922.4	922.4	930.2	933.2	930.2	933.2	930.2
30°	777.0	778.5	787.9	797.3	816.0	830.1	848.9	863.0	869.2	877.0	870.8
32.5°	611.3	606.6	625.4	647.2	676.9	708.2	745.7	775.4	795.7	803.6	794.2
35°	436.2	434.6	451.8	475.2	509.7	555.0	611.3	662.8	698.8	714.4	698.8
37.5°	304.9	306.4	315.8	331.4	358.0	397.0	456.4	520.5	575.3	598.7	572.1
40°	220.4	218.8	225.1	234.5	250.1	275.1	315.8	369.0	423.7	454.9	420.5
42.5°	165.7	164.1	167.3	172.0	179.8	192.3	214.1	242.3	276.7	298.6	272.0
45°	126.6	126.6	126.6	129.8	132.9	137.6	145.4	154.7	167.3	176.6	164.1
47.5°	98.5	98.5	98.5	100.0	101.6	101.6	101.6	100.0	101.6	103.2	100.0
50°	76.6	76.6	76.6	76.6	76.6	75.1	71.9	65.7	64.1	62.5	62.5
52.5°	54.7	54.7	54.7	56.3	57.8	54.7	50.0	45.3	42.2	42.2	42.2
55°	40.6	40.6	40.6	40.6	40.6	37.5	34.4	31.2	29.7	29.7	29.7
57.5°	29.7	29.7	29.7	29.7	28.2	26.6	25.1	23.5	21.9	21.9	21.9
60°	21.9	21.9	21.9	21.9	20.4	18.8	18.8	17.2	17.2	17.2	17.2
62.5°	15.7	15.7	15.7	15.7	15.7	14.1	14.1	12.5	12.5	12.5	12.5
65°	11.0	11.0	11.0	11.0	11.0	11.0	9.4	9.4	9.4	9.4	9.4
67.5°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
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°	3.1	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
75°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
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°	1300.6	1300.6	1300.6	1300.6	1300.6	1300.6	1300.6	1300.6
2.5°	1289.8	1297.5	1297.5	1291.3	1286.6	1294.4	1295.9	1292.9
5°	1281.9	1288.2	1288.2	1281.9	1277.2	1286.6	1286.6	1285.1
7.5°	1260.0	1267.8	1266.3	1261.6	1256.9	1264.7	1267.8	1264.7
10°	1225.7	1233.4	1233.4	1228.8	1224.1	1233.4	1235.0	1231.9
12.5°	1192.8	1200.6	1203.7	1199.0	1197.5	1205.3	1208.4	1205.3
15°	1160.0	1169.4	1171.0	1169.4	1169.4	1178.7	1181.8	1178.7
17.5°	1120.9	1130.3	1133.4	1131.8	1133.4	1142.8	1147.5	1144.3
20°	1075.5	1083.4	1086.5	1086.5	1088.1	1100.6	1106.9	1105.3
22.5°	1027.1	1036.5	1041.2	1042.8	1044.3	1056.8	1063.0	1059.9
25°	981.8	989.6	989.6	989.6	988.0	997.4	1002.0	998.9
27.5°	927.1	928.6	923.9	913.0	905.2	908.3	911.4	903.6
30°	858.3	848.9	831.7	808.3	787.9	780.1	778.5	766.0
32.5°	770.7	744.2	708.2	667.5	631.6	612.8	605.0	590.9
35°	658.1	608.1	551.9	498.7	458.0	437.8	429.9	415.8
37.5°	514.3	451.8	392.3	347.0	320.5	303.3	298.6	290.8
40°	358.0	308.0	268.9	240.7	223.5	215.7	214.1	209.5
42.5°	236.1	208.0	187.6	173.5	165.7	161.0	161.0	157.9
45°	151.6	142.3	136.0	129.8	125.1	123.5	123.5	121.9
47.5°	98.5	100.0	100.0	98.5	95.3	93.8	95.3	93.8
50°	65.7	70.4	73.5	75.1	73.5	71.9	73.5	71.9
52.5°	45.3	50.0	54.7	56.3	54.7	53.1	53.1	53.1
55°	31.2	34.4	37.5	39.1	39.1	39.1	39.1	39.1
57.5°	23.5	25.1	26.6	28.2	29.7	28.2	29.7	28.2
60°	17.2	18.8	20.4	20.4	21.9	21.9	21.9	20.4
62.5°	12.5	14.1	14.1	15.7	15.7	15.7	15.7	15.7
65°	9.4	9.4	11.0	11.0	11.0	11.0	11.0	11.0
67.5°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
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	3.1
75°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
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



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180° - - 45°-225° - - - - 90°-270°









(END OF REPORT)