

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: P136875

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15940 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136875
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 ESQ6A15940 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 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1437.7 lumens
Efficiency: N/A
Efficacy: 63.6 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

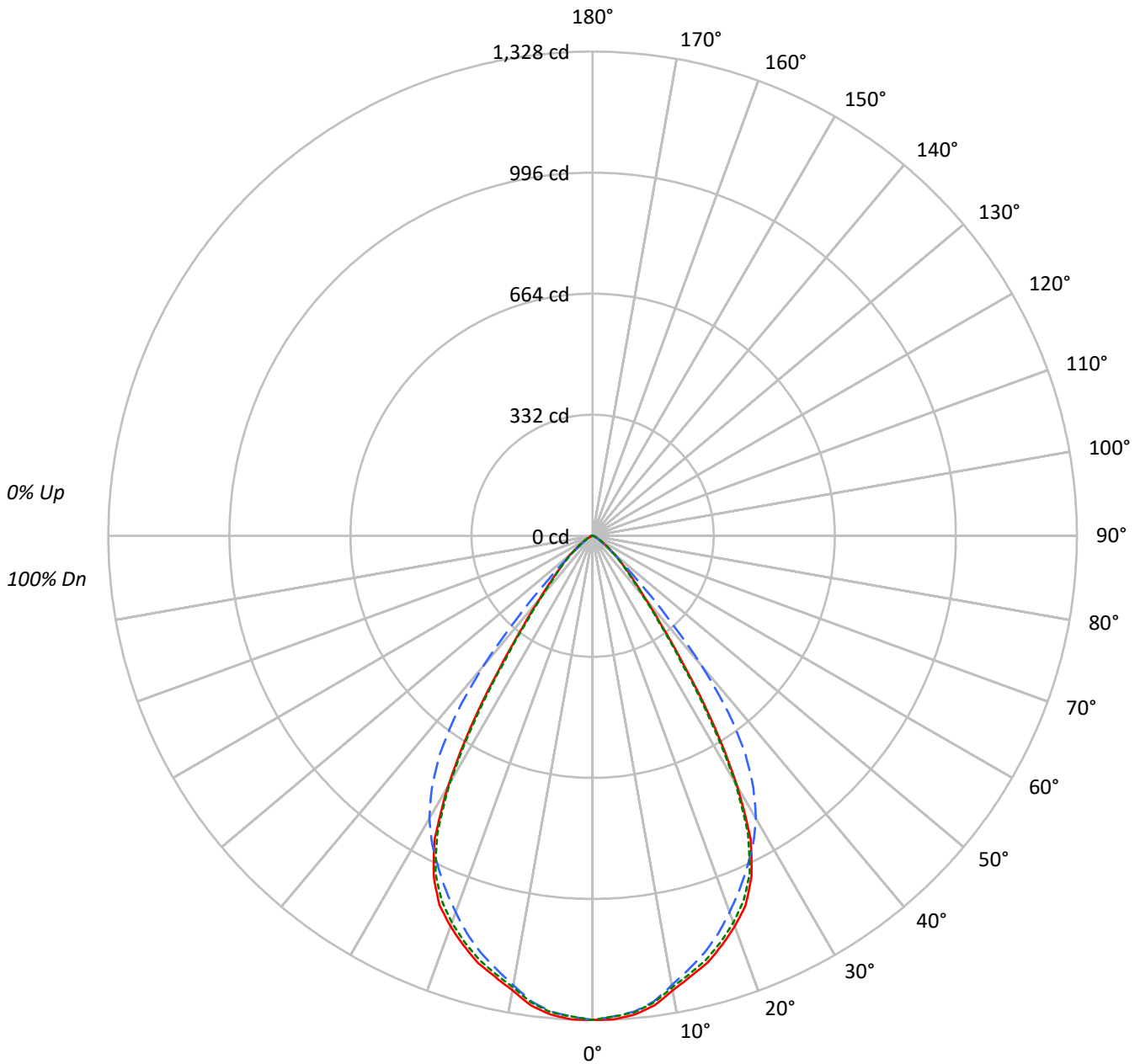
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	57174	57174	57174
5°	56977	56631	56705
10°	55332	54707	54982
15°	54069	52785	53641
20°	52215	50314	51702
25°	48984	47616	48447
30°	39440	44516	38878
35°	23406	38333	22318
40°	12646	26107	12022
45°	7873	10978	7581
50°	5238	4273	4917
55°	3115	2274	2995
60°	1929	1516	1783
65°	1131	978	1131
70°	806	806	604
75°	532	532	532
80°	397	397	397
85°	0	790	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.4	8.6
10°-20°	335.4	23.3
20°-30°	458.8	31.9
30°-40°	347.5	24.2
40°-50°	120.6	8.4
50°-60°	36.1	2.5
60°-70°	11.5	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°	917.6	63.8
0°-40°	1265.1	88.0
0°-60°	1421.8	98.9
0°-90°	1437.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1437.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1318	1314	1310	1312	1312	124
15°	1213	1198	1184	1195	1203	341
25°	1031	1016	1002	1010	1020	462
35°	445	543	729	536	425	290
45°	129	138	180	136	124	105
55°	42	40	30	39	40	39
65°	11	11	10	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°	1327.9	1327.9	1327.9	1327.9	1327.9	1327.9	1327.9	1327.9	1327.9	1327.9	1327.9
2.5°	1327.9	1321.5	1315.1	1319.9	1326.3	1318.3	1319.9	1319.9	1315.1	1319.9	1316.8
5°	1318.3	1313.5	1307.2	1312.0	1316.8	1310.3	1310.3	1310.3	1307.2	1310.3	1308.7
7.5°	1299.2	1292.8	1286.4	1291.1	1295.9	1289.6	1288.0	1289.6	1284.8	1288.0	1286.4
10°	1265.6	1260.8	1254.5	1259.3	1262.4	1254.5	1252.8	1254.5	1248.0	1251.3	1251.3
12.5°	1238.6	1235.3	1227.3	1230.5	1232.1	1224.2	1221.0	1221.0	1214.6	1217.7	1216.2
15°	1213.0	1208.2	1200.2	1201.8	1203.4	1192.2	1189.0	1187.4	1181.1	1184.2	1182.7
17.5°	1177.9	1174.6	1165.1	1166.7	1165.1	1155.5	1149.1	1147.6	1141.1	1144.3	1141.1
20°	1139.6	1134.8	1125.2	1123.6	1120.4	1109.3	1104.5	1102.9	1094.9	1098.1	1096.5
22.5°	1096.5	1090.1	1080.5	1079.0	1075.7	1062.9	1058.1	1055.0	1048.6	1051.8	1048.6
25°	1031.1	1026.3	1018.3	1018.3	1019.8	1011.9	1010.2	1008.7	1000.7	1002.3	1000.7
27.5°	938.5	935.3	932.1	933.7	941.6	941.6	949.6	952.9	949.6	952.9	949.6
30°	793.3	794.8	804.4	814.0	833.1	847.5	866.7	881.0	887.4	895.4	888.9
32.5°	624.1	619.3	638.4	660.7	691.1	723.0	761.3	791.6	812.4	820.3	810.8
35°	445.3	443.7	461.2	485.2	520.3	566.6	624.1	676.8	713.4	729.3	713.4
37.5°	311.2	312.9	322.4	338.4	365.5	405.4	466.0	531.5	587.3	611.3	584.2
40°	225.0	223.4	229.8	239.4	255.4	280.9	322.4	376.7	432.5	464.5	429.4
42.5°	169.2	167.6	170.8	175.5	183.6	196.3	218.6	247.4	282.5	304.9	277.7
45°	129.3	129.3	129.3	132.4	135.7	140.5	148.5	158.0	170.8	180.3	167.6
47.5°	100.6	100.6	100.6	102.1	103.7	103.7	103.7	102.1	103.7	105.4	102.1
50°	78.2	78.2	78.2	78.2	78.2	76.6	73.4	67.0	65.4	63.8	63.8
52.5°	55.9	55.9	55.9	57.5	59.0	55.9	51.1	46.3	43.1	43.1	43.1
55°	41.5	41.5	41.5	41.5	41.5	38.3	35.1	32.0	30.3	30.3	30.3
57.5°	30.3	30.3	30.3	30.3	28.7	27.2	25.5	23.9	22.4	22.4	22.4
60°	22.4	22.4	22.4	22.4	20.7	19.2	19.2	17.6	17.6	17.6	17.6
62.5°	15.9	15.9	15.9	15.9	15.9	14.4	14.4	12.8	12.8	12.8	12.8
65°	11.1	11.1	11.1	11.1	11.1	11.1	9.6	9.6	9.6	9.6	9.6
67.5°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
70°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
72.5°	3.2	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
75°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
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°	1327.9	1327.9	1327.9	1327.9	1327.9	1327.9	1327.9	1327.9
2.5°	1316.8	1324.7	1324.7	1318.3	1313.5	1321.5	1323.1	1319.9
5°	1308.7	1315.1	1315.1	1308.7	1304.0	1313.5	1313.5	1312.0
7.5°	1286.4	1294.4	1292.8	1288.0	1283.2	1291.1	1294.4	1291.1
10°	1251.3	1259.3	1259.3	1254.5	1249.7	1259.3	1260.8	1257.6
12.5°	1217.7	1225.8	1229.0	1224.2	1222.5	1230.5	1233.8	1230.5
15°	1184.2	1193.8	1195.5	1193.8	1193.8	1203.4	1206.6	1203.4
17.5°	1144.3	1153.9	1157.1	1155.5	1157.1	1166.7	1171.5	1168.3
20°	1098.1	1106.0	1109.3	1109.3	1110.8	1123.6	1130.0	1128.4
22.5°	1048.6	1058.1	1062.9	1064.6	1066.1	1079.0	1085.3	1082.1
25°	1002.3	1010.2	1010.2	1010.2	1008.7	1018.3	1023.0	1019.8
27.5°	946.4	948.1	943.3	932.1	924.1	927.3	930.5	922.5
30°	876.2	866.7	849.1	825.1	804.4	796.4	794.8	782.0
32.5°	786.8	759.7	723.0	681.5	644.8	625.6	617.6	603.3
35°	672.0	620.8	563.4	509.1	467.6	446.9	438.9	424.6
37.5°	525.1	461.2	400.6	354.3	327.1	309.6	304.9	296.8
40°	365.5	314.4	274.6	245.8	228.2	220.2	218.6	213.9
42.5°	241.0	212.3	191.6	177.2	169.2	164.4	164.4	161.2
45°	154.8	145.2	138.9	132.4	127.7	126.1	126.1	124.5
47.5°	100.6	102.1	102.1	100.6	97.3	95.8	97.3	95.8
50°	67.0	71.8	75.0	76.6	75.0	73.4	75.0	73.4
52.5°	46.3	51.1	55.9	57.5	55.9	54.2	54.2	54.2
55°	32.0	35.1	38.3	39.9	39.9	39.9	39.9	39.9
57.5°	23.9	25.5	27.2	28.7	30.3	28.7	30.3	28.7
60°	17.6	19.2	20.7	20.7	22.4	22.4	22.4	20.7
62.5°	12.8	14.4	14.4	15.9	15.9	15.9	15.9	15.9
65°	9.6	9.6	11.1	11.1	11.1	11.1	11.1	11.1
67.5°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
70°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	4.8
72.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	3.2
75°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
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)