

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: P136869

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15830 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136869
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 ESQ6A15830 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: 1491.1 lumens
Efficiency: N/A
Efficacy: 66.0 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

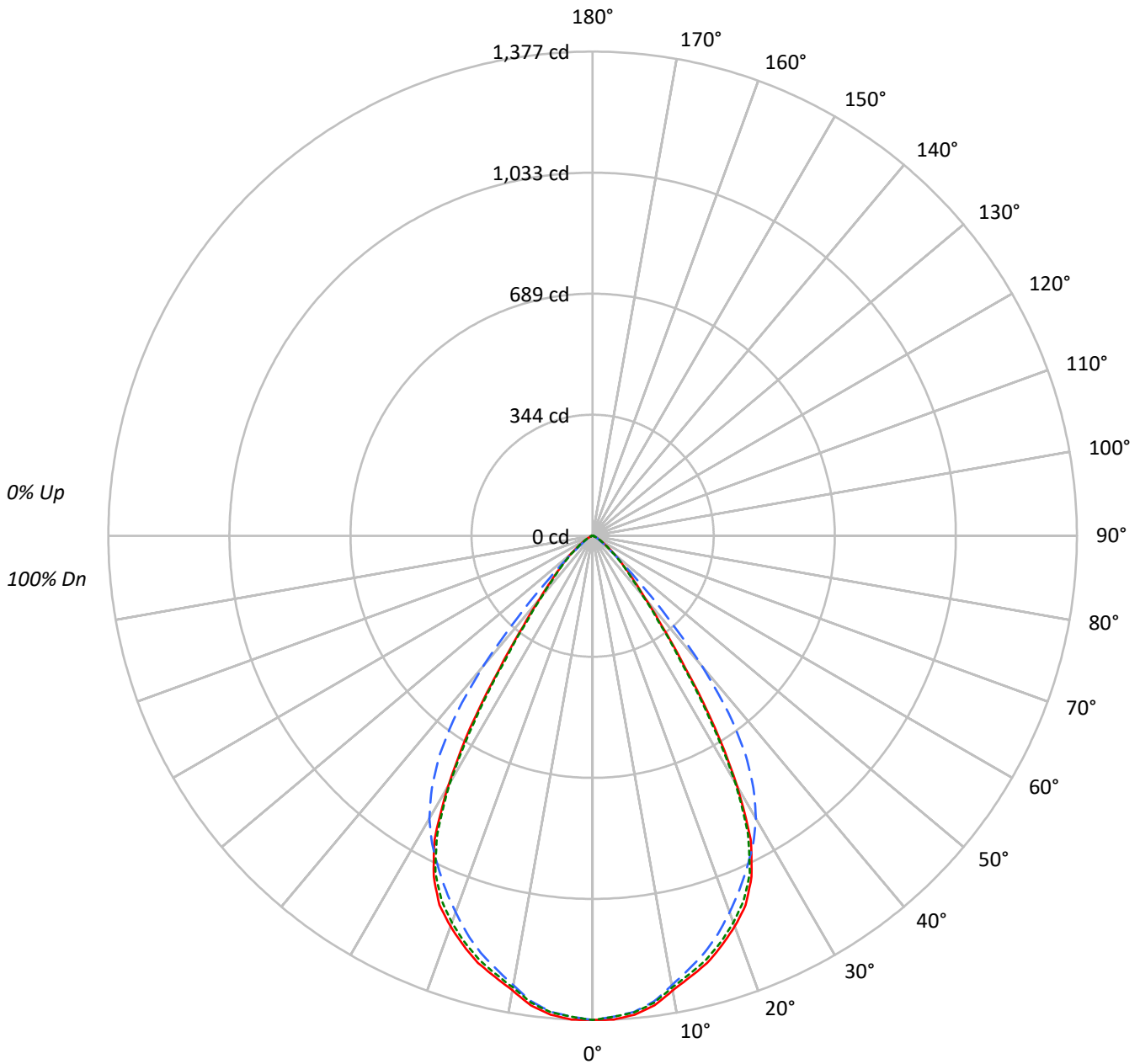
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	59292	59292	59292
5°	59091	58732	58805
10°	57387	56735	57024
15°	56075	54746	55629
20°	54149	52179	53617
25°	50799	49383	50248
30°	40897	46167	40325
35°	24273	39757	23143
40°	13118	27074	12466
45°	8165	11386	7861
50°	5432	4434	5097
55°	3228	2357	3108
60°	1998	1567	1851
65°	1182	1009	1182
70°	831	831	629
75°	549	549	549
80°	422	422	422
85°	0	840	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.0	8.6
10°-20°	347.9	23.3
20°-30°	475.8	31.9
30°-40°	360.3	24.2
40°-50°	125.1	8.4
50°-60°	37.4	2.5
60°-70°	11.9	0.8
70°-80°	3.7	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°	951.7	63.8
0°-40°	1312.0	88.0
0°-60°	1474.5	98.9
0°-90°	1491.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1491.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1377	1377	1377	1377	1377	
5°	1367	1362	1359	1361	1361	129
15°	1258	1242	1228	1239	1248	353
25°	1069	1054	1040	1048	1058	479
35°	462	564	756	556	440	300
45°	134	143	187	141	129	109
55°	43	41	31	41	41	41
65°	12	12	10	12	12	13
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°	1377.1	1377.1	1377.1	1377.1	1377.1	1377.1	1377.1	1377.1	1377.1	1377.1	1377.1
2.5°	1377.1	1370.5	1363.9	1368.9	1375.5	1367.2	1368.9	1368.9	1363.9	1368.9	1365.6
5°	1367.2	1362.2	1355.6	1360.6	1365.6	1358.9	1358.9	1358.9	1355.6	1358.9	1357.3
7.5°	1347.3	1340.7	1334.1	1339.1	1344.0	1337.4	1335.8	1337.4	1332.4	1335.8	1334.1
10°	1312.6	1307.6	1301.0	1306.0	1309.3	1301.0	1299.3	1301.0	1294.4	1297.7	1297.7
12.5°	1284.4	1281.1	1272.9	1276.2	1277.8	1269.6	1266.2	1266.2	1259.6	1262.9	1261.3
15°	1258.0	1253.0	1244.7	1246.4	1248.0	1236.4	1233.1	1231.5	1224.9	1228.2	1226.5
17.5°	1221.5	1218.2	1208.3	1210.0	1208.3	1198.4	1191.8	1190.1	1183.5	1186.8	1183.5
20°	1181.8	1176.9	1166.9	1165.3	1162.0	1150.4	1145.4	1143.8	1135.5	1138.8	1137.1
22.5°	1137.1	1130.5	1120.6	1118.9	1115.6	1102.4	1097.4	1094.1	1087.5	1090.8	1087.5
25°	1069.3	1064.3	1056.0	1056.0	1057.7	1049.4	1047.8	1046.1	1037.8	1039.5	1037.8
27.5°	973.3	970.0	966.6	968.3	976.6	976.6	984.9	988.2	984.9	988.2	984.9
30°	822.6	824.3	834.2	844.2	864.0	878.9	898.8	913.7	920.3	928.6	922.0
32.5°	647.2	642.2	662.1	685.3	716.7	749.8	789.5	821.0	842.5	850.8	840.8
35°	461.8	460.2	478.4	503.2	539.6	587.6	647.2	701.8	739.9	756.4	739.9
37.5°	322.8	324.4	334.4	350.9	379.0	420.4	483.3	551.2	609.1	633.9	605.8
40°	233.4	231.7	238.4	248.3	264.8	291.3	334.4	390.6	448.6	481.7	445.3
42.5°	175.5	173.8	177.1	182.1	190.3	203.6	226.8	256.6	293.0	316.1	288.0
45°	134.1	134.1	134.1	137.4	140.7	145.7	153.9	163.9	177.1	187.0	173.8
47.5°	104.3	104.3	104.3	105.9	107.6	107.6	107.6	105.9	107.6	109.2	105.9
50°	81.1	81.1	81.1	81.1	81.1	79.5	76.1	69.5	67.9	66.2	66.2
52.5°	57.9	57.9	57.9	59.6	61.2	57.9	53.0	48.0	44.7	44.7	44.7
55°	43.0	43.0	43.0	43.0	43.0	39.7	36.4	33.1	31.4	31.4	31.4
57.5°	31.4	31.4	31.4	31.4	29.8	28.1	26.5	24.8	23.2	23.2	23.2
60°	23.2	23.2	23.2	23.2	21.5	19.9	19.9	18.2	18.2	18.2	18.2
62.5°	16.6	16.6	16.6	16.6	16.6	14.9	14.9	13.2	13.2	13.2	13.2
65°	11.6	11.6	11.6	11.6	11.6	11.6	9.9	9.9	9.9	9.9	9.9
67.5°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
70°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
72.5°	3.3	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
75°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7
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°	1377.1	1377.1	1377.1	1377.1	1377.1	1377.1	1377.1	1377.1
2.5°	1365.6	1373.8	1373.8	1367.2	1362.2	1370.5	1372.2	1368.9
5°	1357.3	1363.9	1363.9	1357.3	1352.3	1362.2	1362.2	1360.6
7.5°	1334.1	1342.4	1340.7	1335.8	1330.8	1339.1	1342.4	1339.1
10°	1297.7	1306.0	1306.0	1301.0	1296.0	1306.0	1307.6	1304.3
12.5°	1262.9	1271.2	1274.5	1269.6	1267.9	1276.2	1279.5	1276.2
15°	1228.2	1238.1	1239.8	1238.1	1238.1	1248.0	1251.3	1248.0
17.5°	1186.8	1196.7	1200.0	1198.4	1200.0	1210.0	1214.9	1211.6
20°	1138.8	1147.1	1150.4	1150.4	1152.0	1165.3	1171.9	1170.2
22.5°	1087.5	1097.4	1102.4	1104.0	1105.7	1118.9	1125.5	1122.2
25°	1039.5	1047.8	1047.8	1047.8	1046.1	1056.0	1061.0	1057.7
27.5°	981.5	983.2	978.2	966.6	958.4	961.7	965.0	956.7
30°	908.7	898.8	880.6	855.7	834.2	826.0	824.3	811.1
32.5°	816.0	787.9	749.8	706.8	668.7	648.8	640.6	625.7
35°	696.8	643.9	584.3	528.0	485.0	463.5	455.2	440.3
37.5°	544.6	478.4	415.5	367.5	339.3	321.1	316.1	307.9
40°	379.0	326.1	284.7	254.9	236.7	228.4	226.8	221.8
42.5°	249.9	220.1	198.6	183.7	175.5	170.5	170.5	167.2
45°	160.6	150.6	144.0	137.4	132.4	130.8	130.8	129.1
47.5°	104.3	105.9	105.9	104.3	101.0	99.3	101.0	99.3
50°	69.5	74.5	77.8	79.5	77.8	76.1	77.8	76.1
52.5°	48.0	53.0	57.9	59.6	57.9	56.3	56.3	56.3
55°	33.1	36.4	39.7	41.4	41.4	41.4	41.4	41.4
57.5°	24.8	26.5	28.1	29.8	31.4	29.8	31.4	29.8
60°	18.2	19.9	21.5	21.5	23.2	23.2	23.2	21.5
62.5°	13.2	14.9	14.9	16.6	16.6	16.6	16.6	16.6
65°	9.9	9.9	11.6	11.6	11.6	11.6	11.6	11.6
67.5°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
70°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	5.0
72.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	3.3
75°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
85°	1.7	1.7	0.0	1.7	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)