

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: P136752

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15827 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136752
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: LDSQ6A15D010TE ESQ6A15827 6LSQ1LI
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 2700K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1517.0 lumens
Efficiency: N/A
Efficacy: 67.1 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

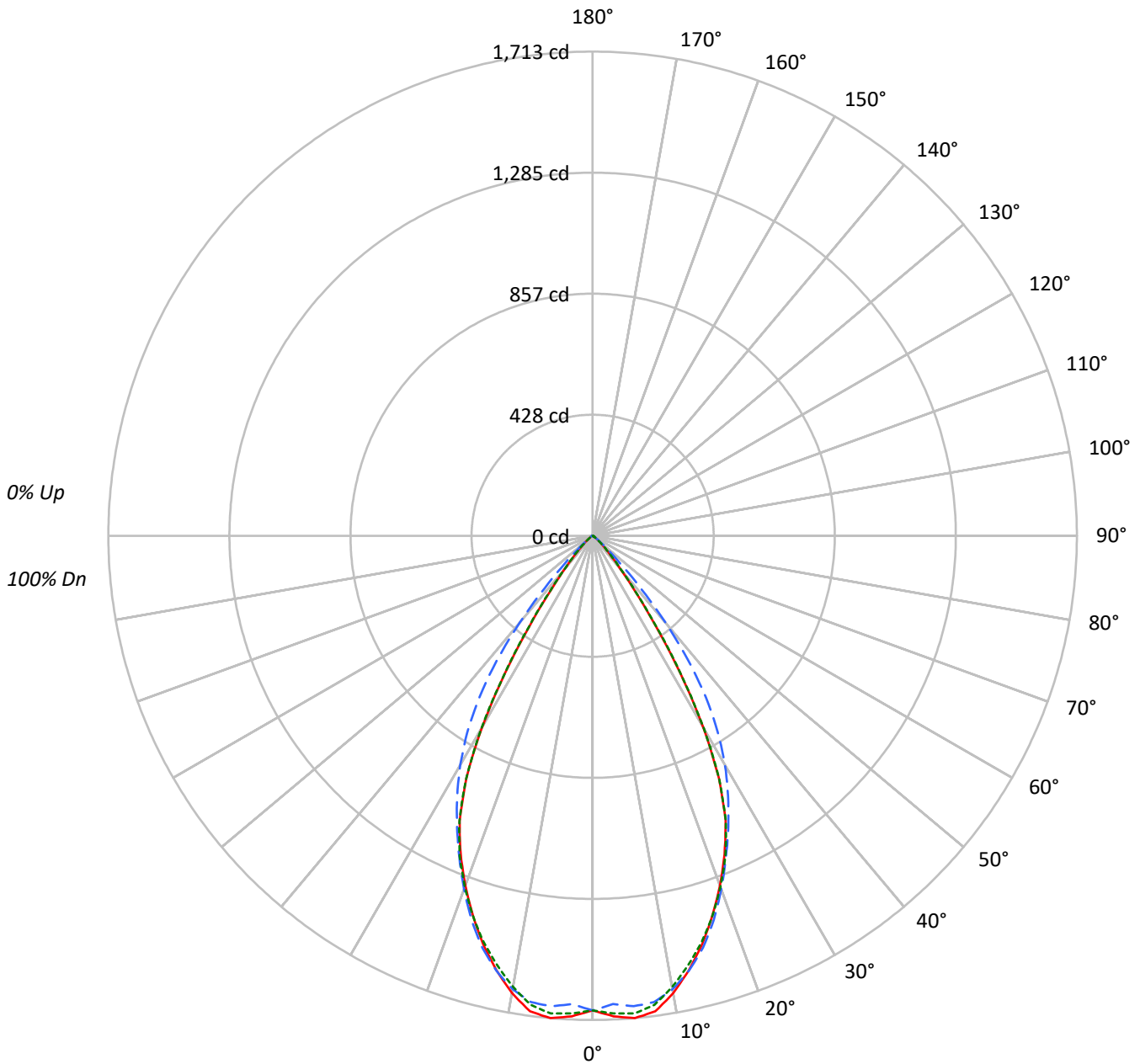
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20	
RC	80				70				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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94				94
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	91	89	87				87
3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	88	85	83	81				81
4	97	90	84	80	96	89	84	80	87	82	79	85	81	78	83	80	77	75				75
5	93	84	78	74	91	83	78	74	81	77	73	80	76	72	78	75	72	70				70
6	88	79	73	69	86	78	73	69	77	72	68	75	71	68	74	70	67	66				66
7	84	74	68	64	82	74	68	64	72	67	64	71	67	63	70	66	63	62				62
8	79	70	64	60	78	69	64	60	68	63	60	67	63	59	66	62	59	58				58
9	76	66	60	56	75	66	60	56	65	59	56	64	59	56	63	59	56	54				54
10	72	62	57	53	71	62	56	53	61	56	53	60	56	52	60	55	52	51				51

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	86042	86042	86042
5°	88109	85939	87240
10°	85465	84768	84326
15°	79364	80033	78950
20°	71787	72512	72054
25°	62880	64152	63039
30°	46298	55386	46511
35°	24058	43705	24583
40°	10127	26809	10555
45°	4645	9957	4797
50°	2136	2973	2192
55°	1072	1197	1072
60°	646	717	646
65°	424	509	424
70°	315	315	315
75°	139	277	139
80°	207	207	207
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.9	10.5
10°-20°	417.8	27.5
20°-30°	510.8	33.7
30°-40°	328.2	21.6
40°-50°	81.9	5.4
50°-60°	13.7	0.9
60°-70°	4.1	0.3
70°-80°	1.2	0.1
80°-90°	0.3	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°	1087.5	71.7
0°-40°	1415.7	93.3
0°-60°	1511.3	99.6
0°-90°	1517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1517.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1679	1679	1679	1679	1679	
5°	1713	1676	1671	1672	1696	161
15°	1496	1504	1509	1492	1488	417
25°	1112	1142	1135	1146	1115	496
35°	385	508	699	517	393	254
45°	64	80	137	85	66	55
55°	12	13	13	13	12	12
65°	4	4	4	4	4	4
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°	1679.2	1679.2	1679.2	1679.2	1679.2	1679.2	1679.2	1679.2	1679.2	1679.2	1679.2
2.5°	1701.7	1659.5	1692.6	1689.8	1661.6	1667.2	1672.2	1671.5	1670.8	1658.1	1687.7
5°	1713.0	1670.0	1703.9	1699.6	1673.6	1679.2	1682.0	1683.4	1679.9	1670.8	1698.9
7.5°	1696.8	1656.7	1689.1	1684.1	1663.7	1668.6	1670.8	1674.3	1669.3	1664.4	1691.2
10°	1642.6	1608.8	1639.1	1635.5	1622.2	1627.8	1629.2	1634.8	1629.2	1629.2	1653.1
12.5°	1573.6	1547.5	1575.0	1572.1	1567.2	1573.6	1571.4	1581.3	1572.8	1575.7	1597.5
15°	1496.1	1479.2	1501.7	1501.0	1501.7	1506.6	1500.3	1507.3	1499.6	1508.7	1527.8
17.5°	1408.7	1401.0	1418.6	1419.3	1424.9	1426.3	1416.5	1425.6	1414.4	1424.9	1441.1
20°	1316.5	1317.9	1332.0	1329.8	1338.3	1334.1	1320.0	1329.1	1317.9	1329.8	1342.5
22.5°	1219.3	1231.2	1239.0	1237.6	1248.8	1243.2	1225.6	1229.8	1218.6	1231.9	1239.7
25°	1112.2	1125.6	1131.2	1131.2	1143.2	1141.1	1125.6	1132.6	1122.1	1134.7	1139.0
27.5°	966.4	983.3	987.5	996.0	1016.4	1020.6	1014.3	1028.4	1024.1	1037.5	1036.1
30°	782.5	799.5	805.8	822.7	855.8	875.5	886.1	913.6	920.6	936.1	928.4
32.5°	576.9	591.0	600.1	625.5	669.1	709.3	745.2	786.1	807.9	824.8	810.7
35°	384.6	395.1	405.0	436.7	482.5	532.5	584.6	643.1	680.4	698.7	679.7
37.5°	241.6	248.6	255.0	278.2	314.9	361.3	417.0	483.9	535.3	557.2	533.2
40°	151.4	155.7	159.2	173.3	195.8	224.0	271.2	327.5	380.4	400.8	378.2
42.5°	97.2	99.3	101.4	109.2	121.2	138.8	164.8	200.0	236.7	250.8	236.0
45°	64.1	64.8	65.5	69.7	76.1	84.5	97.9	114.1	131.7	137.4	131.0
47.5°	42.3	42.3	43.0	45.8	49.3	54.2	59.2	63.4	69.0	71.8	68.3
50°	26.8	27.5	28.2	30.3	32.4	34.5	35.9	35.9	37.3	37.3	36.6
52.5°	16.2	16.2	16.9	17.6	20.4	22.5	22.5	21.1	21.1	21.1	20.4
55°	12.0	12.0	12.0	12.7	13.4	13.4	13.4	13.4	13.4	13.4	12.7
57.5°	9.2	9.2	9.2	9.9	9.9	9.9	9.9	9.2	9.2	9.2	9.2
60°	6.3	6.3	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	6.3
62.5°	4.9	4.9	4.9	5.6	5.6	5.6	5.6	5.6	5.6	4.9	4.9
65°	3.5	3.5	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
67.5°	2.8	2.8	2.8	2.8	2.8	2.8	3.5	2.8	2.8	2.8	2.8
70°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
75°	0.7	0.7	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.0	0.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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°	1679.2	1679.2	1679.2	1679.2	1679.2	1679.2	1679.2	1679.2
2.5°	1694.7	1696.8	1665.8	1672.2	1694.7	1672.2	1672.9	1691.2
5°	1701.0	1700.3	1668.6	1676.4	1689.8	1673.6	1674.3	1696.1
7.5°	1687.0	1680.6	1648.9	1658.1	1661.6	1650.3	1650.3	1674.3
10°	1643.3	1632.7	1603.1	1612.3	1606.0	1598.9	1596.8	1620.7
12.5°	1586.2	1574.3	1548.9	1557.4	1541.9	1541.9	1535.5	1557.4
15°	1515.1	1504.5	1486.9	1496.8	1473.5	1478.5	1468.6	1488.3
17.5°	1429.9	1422.8	1413.0	1424.9	1397.5	1405.9	1392.5	1409.4
20°	1332.0	1328.4	1327.0	1339.0	1310.8	1324.9	1309.4	1321.4
22.5°	1230.5	1230.5	1238.3	1254.5	1223.5	1239.0	1220.7	1227.7
25°	1130.5	1131.2	1140.4	1151.6	1121.3	1134.7	1114.3	1115.0
27.5°	1024.1	1017.8	1027.7	1025.6	987.5	995.3	973.4	969.2
30°	907.2	888.2	881.2	861.4	818.5	817.1	794.5	786.1
32.5°	779.0	743.1	721.3	681.1	626.2	613.5	593.1	583.2
35°	636.7	582.5	543.1	490.2	436.0	417.7	401.5	393.0
37.5°	480.4	418.4	373.3	322.6	283.9	269.1	255.7	250.0
40°	327.5	274.7	236.0	202.2	178.2	169.0	161.3	157.8
42.5°	202.2	168.3	145.8	125.4	112.0	107.1	103.5	101.4
45°	115.5	100.0	90.2	78.9	72.5	69.7	67.6	66.2
47.5°	64.1	59.9	56.3	51.4	47.2	45.1	44.4	43.7
50°	35.9	36.6	36.6	33.8	31.7	29.6	28.2	27.5
52.5°	21.1	22.5	23.2	21.1	18.3	16.9	16.9	16.2
55°	13.4	13.4	13.4	13.4	12.7	12.0	12.0	12.0
57.5°	9.2	9.2	9.9	9.9	9.9	9.2	9.2	8.5
60°	7.0	7.0	7.0	7.0	7.0	7.0	6.3	6.3
62.5°	5.6	5.6	5.6	5.6	5.6	4.9	4.9	4.9
65°	4.2	4.2	4.2	4.2	4.2	3.5	3.5	3.5
67.5°	2.8	3.5	2.8	2.8	2.8	2.8	2.8	2.8
70°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
75°	1.4	1.4	1.4	1.4	1.4	0.7	0.7	0.7
77.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.7
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



Report Generated By E9808895 / USPTCWHP6082093





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









(END OF REPORT)