

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: P136753

Luminaire Tested: **LDSQ6A15D010TE ESQ6A15830 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136753
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 ESQ6A15830 6LSQ1LI
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1588.0 lumens
Efficiency: N/A
Efficacy: 70.3 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

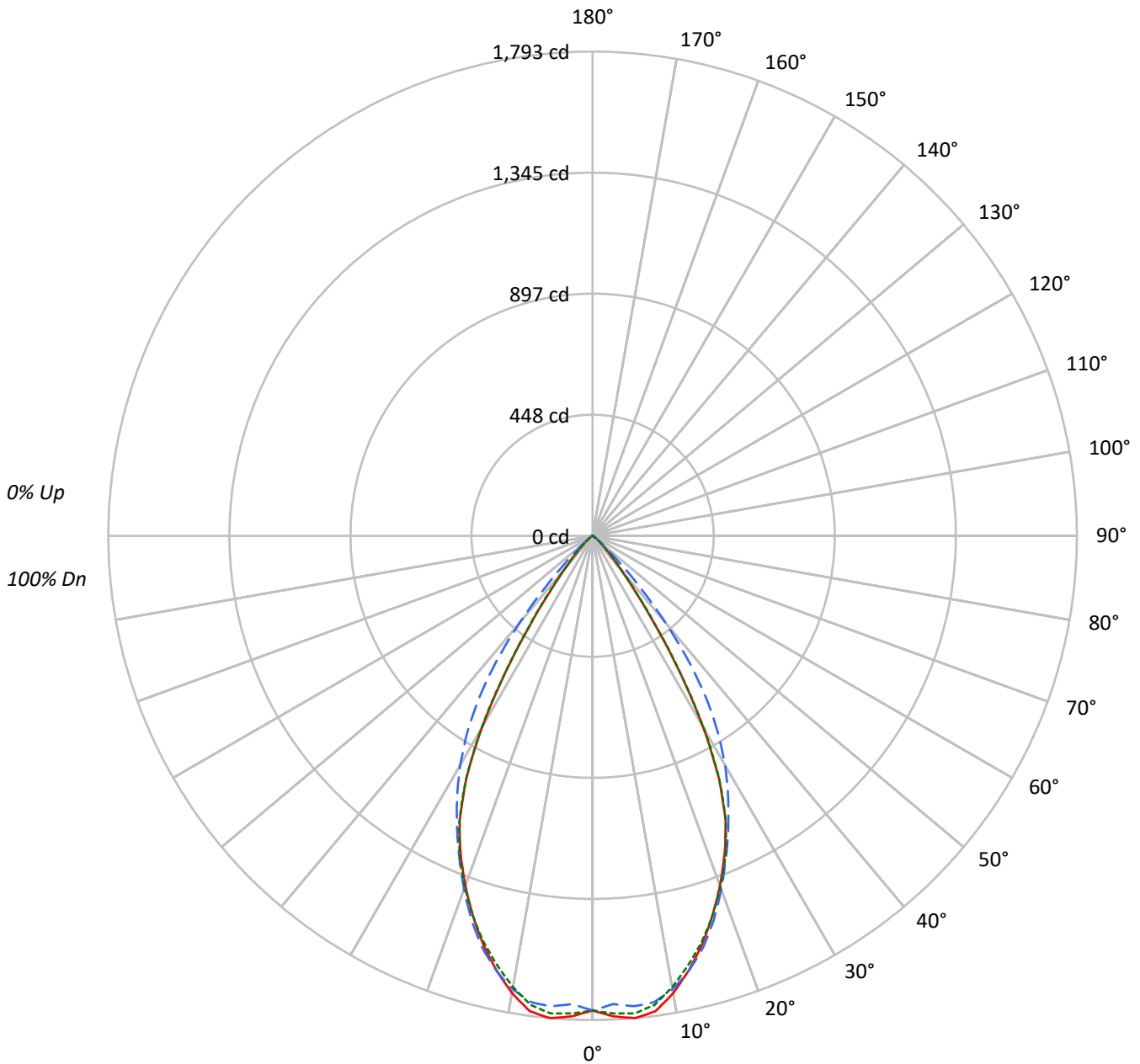
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P136753

CATALOG NUMBER: LDSQ6A15D010TE ESQ6A15830 6LSQ1LI

Luminous Intensity Polar Plot





TEST NUMBER: P136753

CATALOG NUMBER: LDSQ6A15D010TE ESQ6A15830 6LSQ1LI

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	90069	90069	90069
5°	92234	89956	91324
10°	89466	88733	88275
15°	83078	83783	82648
20°	75145	75909	75424
25°	65820	67155	65990
30°	48469	57977	48688
35°	25184	45751	25734
40°	10602	28060	11050
45°	4862	10420	5022
50°	2232	3117	2296
55°	1117	1251	1117
60°	676	758	676
65°	449	533	449
70°	330	330	330
75°	139	297	139
80°	207	207	207
85°	0	0	0



TEST NUMBER: P136753

CATALOG NUMBER: LDSQ6A15D010TE ESQ6A15830 6LSQ1LI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.4	10.5
10°-20°	437.3	27.5
20°-30°	534.7	33.7
30°-40°	343.6	21.6
40°-50°	85.7	5.4
50°-60°	14.4	0.9
60°-70°	4.3	0.3
70°-80°	1.3	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°	1138.4	71.7
0°-40°	1482.0	93.3
0°-60°	1582.1	99.6
0°-90°	1588.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1588.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1758	1758	1758	1758	1758	
5°	1793	1755	1749	1751	1776	169
15°	1566	1575	1579	1562	1558	437
25°	1164	1196	1188	1200	1167	519
35°	403	531	731	541	411	266
45°	67	84	144	88	69	58
55°	12	14	14	14	12	12
65°	4	4	4	4	4	4
75°	1	2	2	2	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



TEST NUMBER: P136753

CATALOG NUMBER: LDSQ6A15D010TE ESQ6A15830 6LSQ1LI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8
2.5°	1781.4	1737.2	1771.8	1768.9	1739.4	1745.3	1750.4	1749.7	1748.9	1735.7	1766.6
5°	1793.2	1748.2	1783.6	1779.2	1751.9	1757.8	1760.7	1762.2	1758.5	1748.9	1778.4
7.5°	1776.2	1734.2	1768.1	1763.0	1741.6	1746.7	1748.9	1752.6	1747.5	1742.3	1770.3
10°	1719.5	1684.1	1715.8	1712.1	1698.1	1704.0	1705.4	1711.3	1705.4	1705.4	1730.5
12.5°	1647.2	1619.9	1648.7	1645.7	1640.6	1647.2	1645.0	1655.3	1646.5	1649.4	1672.3
15°	1566.1	1548.4	1572.0	1571.3	1572.0	1577.2	1570.5	1577.9	1569.8	1579.4	1599.3
17.5°	1474.7	1466.6	1485.0	1485.7	1491.6	1493.1	1482.8	1492.4	1480.6	1491.6	1508.6
20°	1378.1	1379.5	1394.3	1392.1	1400.9	1396.5	1381.8	1391.3	1379.5	1392.1	1405.4
22.5°	1276.3	1288.9	1297.0	1295.5	1307.3	1301.4	1283.0	1287.4	1275.6	1289.6	1297.7
25°	1164.2	1178.3	1184.2	1184.2	1196.7	1194.5	1178.3	1185.6	1174.6	1187.8	1192.3
27.5°	1011.6	1029.3	1033.7	1042.6	1064.0	1068.4	1061.8	1076.5	1072.1	1086.1	1084.6
30°	819.2	836.9	843.5	861.2	895.9	916.5	927.6	956.3	963.7	979.9	971.8
32.5°	603.9	618.6	628.2	654.7	700.5	742.5	780.1	822.9	845.7	863.4	848.7
35°	402.6	413.6	424.0	457.1	505.1	557.4	612.0	673.2	712.3	731.4	711.5
37.5°	252.9	260.3	266.9	291.2	329.6	378.3	436.5	506.5	560.4	583.2	558.2
40°	158.5	163.0	166.6	181.4	205.0	234.5	283.9	342.9	398.2	419.5	395.9
42.5°	101.8	104.0	106.2	114.3	126.8	145.3	172.5	209.4	247.7	262.5	247.0
45°	67.1	67.8	68.6	73.0	79.6	88.5	102.5	119.4	137.9	143.8	137.1
47.5°	44.2	44.2	45.0	47.9	51.6	56.8	61.9	66.4	72.3	75.2	71.5
50°	28.0	28.8	29.5	31.7	33.9	36.1	37.6	37.6	39.1	39.1	38.3
52.5°	17.0	17.0	17.7	18.4	21.4	23.6	23.6	22.1	22.1	22.1	21.4
55°	12.5	12.5	12.5	13.3	14.0	14.0	14.0	14.0	14.0	14.0	13.3
57.5°	9.6	9.6	9.6	10.3	10.3	10.3	10.3	9.6	9.6	9.6	9.6
60°	6.6	6.6	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	6.6
62.5°	5.2	5.2	5.2	5.9	5.9	5.9	5.9	5.9	5.9	5.2	5.2
65°	3.7	3.7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
67.5°	2.9	2.9	2.9	2.9	2.9	2.9	3.7	2.9	2.9	2.9	2.9
70°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
75°	0.7	0.7	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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



TEST NUMBER: P136753

CATALOG NUMBER: LDSQ6A15D010TE ESQ6A15830 6LSQ1LI

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8	1757.8
2.5°	1774.0	1776.2	1743.8	1750.4	1774.0	1750.4	1751.2	1770.3
5°	1780.7	1779.9	1746.7	1754.8	1768.9	1751.9	1752.6	1775.5
7.5°	1765.9	1759.3	1726.1	1735.7	1739.4	1727.6	1727.6	1752.6
10°	1720.2	1709.1	1678.2	1687.8	1681.1	1673.7	1671.5	1696.6
12.5°	1660.5	1647.9	1621.4	1630.2	1614.0	1614.0	1607.4	1630.2
15°	1586.0	1574.9	1556.5	1566.8	1542.5	1547.7	1537.3	1558.0
17.5°	1496.8	1489.4	1479.1	1491.6	1462.9	1471.7	1457.7	1475.4
20°	1394.3	1390.6	1389.1	1401.7	1372.2	1386.9	1370.7	1383.2
22.5°	1288.1	1288.1	1296.2	1313.2	1280.7	1297.0	1277.8	1285.2
25°	1183.4	1184.2	1193.7	1205.5	1173.8	1187.8	1166.5	1167.2
27.5°	1072.1	1065.4	1075.8	1073.6	1033.7	1041.8	1019.0	1014.6
30°	949.7	929.8	922.4	901.8	856.8	855.3	831.7	822.9
32.5°	815.5	777.9	755.0	713.0	655.5	642.2	620.8	610.5
35°	666.5	609.8	568.5	513.2	456.4	437.2	420.3	411.4
37.5°	502.9	438.0	390.8	337.7	297.1	281.7	267.7	261.8
40°	342.9	287.6	247.0	211.6	186.5	177.0	168.8	165.2
42.5°	211.6	176.2	152.6	131.2	117.2	112.1	108.4	106.2
45°	120.9	104.7	94.4	82.6	75.9	73.0	70.8	69.3
47.5°	67.1	62.7	59.0	53.8	49.4	47.2	46.5	45.7
50°	37.6	38.3	38.3	35.4	33.2	31.0	29.5	28.8
52.5°	22.1	23.6	24.3	22.1	19.2	17.7	17.7	17.0
55°	14.0	14.0	14.0	14.0	13.3	12.5	12.5	12.5
57.5°	9.6	9.6	10.3	10.3	10.3	9.6	9.6	8.8
60°	7.4	7.4	7.4	7.4	7.4	7.4	6.6	6.6
62.5°	5.9	5.9	5.9	5.9	5.9	5.2	5.2	5.2
65°	4.4	4.4	4.4	4.4	4.4	3.7	3.7	3.7
67.5°	2.9	3.7	2.9	2.9	2.9	2.9	2.9	2.9
70°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
75°	1.5	1.5	1.5	1.5	1.5	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)