

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: P136904

Luminaire Tested: **LDSQ6A20D010TE ESQ6A20927 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136904
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: LDSQ6A20D010TE ESQ6A20927 6LSQ1H
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: 2035.8 lumens
Efficiency: N/A
Efficacy: 62.1 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

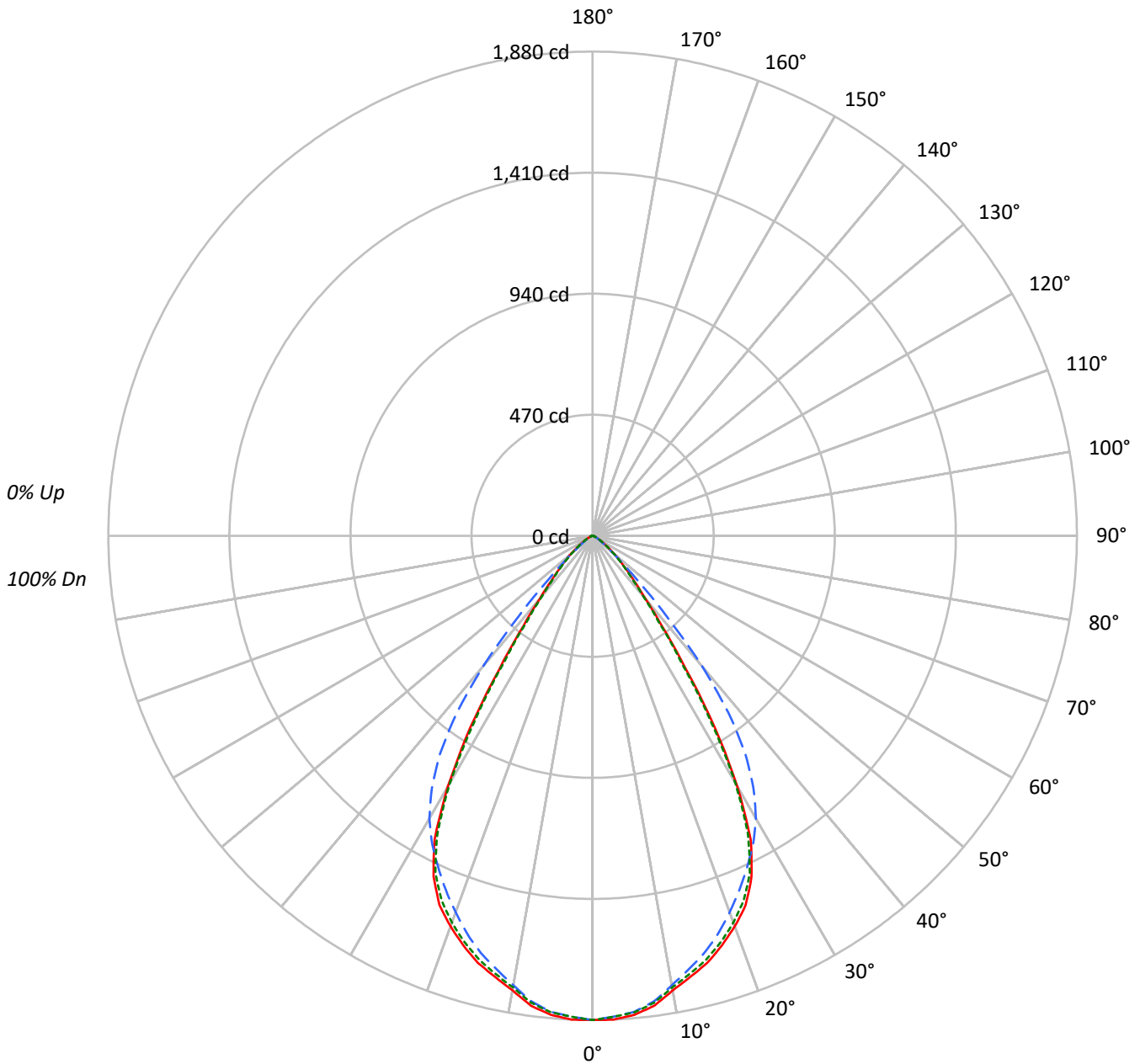
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	80958	80958	80958
5°	80683	80191	80290
10°	78355	77463	77856
15°	76561	74747	75955
20°	73933	71244	73209
25°	69360	67421	68604
30°	55841	63030	55056
35°	33145	54285	31595
40°	17907	36966	17025
45°	11143	15551	10735
50°	7415	6055	6966
55°	4406	3228	4241
60°	2721	2144	2532
65°	1620	1386	1620
70°	1133	1133	856
75°	749	749	749
80°	570	570	570
85°	0	1136	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.7	8.6
10°-20°	475.0	23.3
20°-30°	649.6	31.9
30°-40°	492.0	24.2
40°-50°	170.8	8.4
50°-60°	51.1	2.5
60°-70°	16.2	0.8
70°-80°	5.0	0.2
80°-90°	1.3	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°	1299.4	63.8
0°-40°	1791.4	88.0
0°-60°	2013.3	98.9
0°-90°	2035.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2035.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1880	1880	1880	1880	1880	
5°	1867	1860	1855	1858	1858	176
15°	1718	1696	1677	1692	1704	482
25°	1460	1438	1419	1431	1444	654
35°	631	770	1033	759	601	410
45°	183	196	255	192	176	149
55°	59	56	43	55	56	56
65°	16	16	14	16	16	17
75°	4	4	4	4	4	4
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°	1880.3	1880.3	1880.3	1880.3	1880.3	1880.3	1880.3	1880.3	1880.3	1880.3	1880.3
2.5°	1880.3	1871.3	1862.3	1869.0	1878.0	1866.8	1869.0	1869.0	1862.3	1869.0	1864.5
5°	1866.8	1860.0	1850.9	1857.7	1864.5	1855.4	1855.4	1855.4	1850.9	1855.4	1853.2
7.5°	1839.7	1830.6	1821.6	1828.3	1835.1	1826.1	1823.8	1826.1	1819.3	1823.8	1821.6
10°	1792.2	1785.4	1776.3	1783.1	1787.7	1776.3	1774.1	1776.3	1767.3	1771.8	1771.8
12.5°	1753.7	1749.2	1738.0	1742.5	1744.7	1733.5	1728.9	1728.9	1719.9	1724.4	1722.1
15°	1717.6	1710.8	1699.5	1701.7	1704.0	1688.2	1683.7	1681.5	1672.4	1676.9	1674.6
17.5°	1667.9	1663.4	1649.8	1652.0	1649.8	1636.3	1627.2	1624.9	1615.9	1620.4	1615.9
20°	1613.6	1606.9	1593.3	1591.0	1586.5	1570.7	1563.9	1561.7	1550.3	1554.9	1552.6
22.5°	1552.6	1543.6	1530.1	1527.8	1523.2	1505.2	1498.3	1493.8	1484.8	1489.3	1484.8
25°	1460.0	1453.2	1441.9	1441.9	1444.1	1432.9	1430.6	1428.3	1417.0	1419.2	1417.0
27.5°	1328.9	1324.4	1319.8	1322.1	1333.4	1333.4	1344.7	1349.3	1344.7	1349.3	1344.7
30°	1123.2	1125.5	1139.0	1152.6	1179.7	1200.1	1227.2	1247.6	1256.6	1267.8	1258.8
32.5°	883.6	876.9	904.0	935.6	978.6	1023.8	1078.0	1121.0	1150.4	1161.6	1148.1
35°	630.6	628.3	653.1	687.1	736.8	802.3	883.6	958.2	1010.2	1032.8	1010.2
37.5°	440.7	442.9	456.5	479.2	517.5	574.0	659.9	752.5	831.6	865.6	827.1
40°	318.6	316.4	325.5	339.0	361.6	397.8	456.5	533.4	612.5	657.7	608.0
42.5°	239.5	237.3	241.8	248.6	259.9	278.0	309.6	350.3	400.1	431.7	393.2
45°	183.0	183.0	183.0	187.5	192.1	198.9	210.2	223.8	241.8	255.4	237.3
47.5°	142.4	142.4	142.4	144.7	146.9	146.9	146.9	144.7	146.9	149.2	144.7
50°	110.7	110.7	110.7	110.7	110.7	108.5	104.0	94.9	92.7	90.4	90.4
52.5°	79.1	79.1	79.1	81.3	83.6	79.1	72.3	65.6	61.0	61.0	61.0
55°	58.7	58.7	58.7	58.7	58.7	54.2	49.7	45.2	43.0	43.0	43.0
57.5°	43.0	43.0	43.0	43.0	40.7	38.4	36.1	33.9	31.6	31.6	31.6
60°	31.6	31.6	31.6	31.6	29.4	27.1	27.1	24.9	24.9	24.9	24.9
62.5°	22.6	22.6	22.6	22.6	22.6	20.4	20.4	18.1	18.1	18.1	18.1
65°	15.9	15.9	15.9	15.9	15.9	15.9	13.6	13.6	13.6	13.6	13.6
67.5°	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
70°	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
72.5°	4.5	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
75°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
77.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	0.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3	2.3	2.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3	2.3
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°	1880.3	1880.3	1880.3	1880.3	1880.3	1880.3	1880.3	1880.3
2.5°	1864.5	1875.8	1875.8	1866.8	1860.0	1871.3	1873.5	1869.0
5°	1853.2	1862.3	1862.3	1853.2	1846.4	1860.0	1860.0	1857.7
7.5°	1821.6	1832.8	1830.6	1823.8	1817.1	1828.3	1832.8	1828.3
10°	1771.8	1783.1	1783.1	1776.3	1769.6	1783.1	1785.4	1780.8
12.5°	1724.4	1735.7	1740.2	1733.5	1731.1	1742.5	1747.0	1742.5
15°	1676.9	1690.5	1692.7	1690.5	1690.5	1704.0	1708.6	1704.0
17.5°	1620.4	1634.0	1638.5	1636.3	1638.5	1652.0	1658.9	1654.3
20°	1554.9	1566.2	1570.7	1570.7	1572.9	1591.0	1600.0	1597.8
22.5°	1484.8	1498.3	1505.2	1507.4	1509.7	1527.8	1536.8	1532.3
25°	1419.2	1430.6	1430.6	1430.6	1428.3	1441.9	1448.6	1444.1
27.5°	1340.2	1342.4	1335.7	1319.8	1308.5	1313.0	1317.5	1306.3
30°	1240.7	1227.2	1202.3	1168.5	1139.0	1127.7	1125.5	1107.4
32.5°	1114.1	1075.8	1023.8	965.1	913.1	885.9	874.6	854.2
35°	951.4	879.1	797.8	720.9	662.2	632.8	621.5	601.1
37.5°	743.5	653.1	567.2	501.8	463.3	438.4	431.7	420.3
40°	517.5	445.2	388.7	348.1	323.2	311.9	309.6	302.9
42.5°	341.2	300.6	271.2	250.9	239.5	232.8	232.8	228.3
45°	219.3	205.7	196.7	187.5	180.8	178.5	178.5	176.3
47.5°	142.4	144.7	144.7	142.4	137.8	135.6	137.8	135.6
50°	94.9	101.7	106.2	108.5	106.2	104.0	106.2	104.0
52.5°	65.6	72.3	79.1	81.3	79.1	76.8	76.8	76.8
55°	45.2	49.7	54.2	56.5	56.5	56.5	56.5	56.5
57.5°	33.9	36.1	38.4	40.7	43.0	40.7	43.0	40.7
60°	24.9	27.1	29.4	29.4	31.6	31.6	31.6	29.4
62.5°	18.1	20.4	20.4	22.6	22.6	22.6	22.6	22.6
65°	13.6	13.6	15.9	15.9	15.9	15.9	15.9	15.9
67.5°	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
70°	9.0	9.0	9.0	9.0	9.0	9.0	9.0	6.8
72.5°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	4.5
75°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
77.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
85°	2.3	2.3	0.0	2.3	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)