

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: P136900

Luminaire Tested: **LDSQ6A20D010TE ESQ6A20827 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136900
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 ESQ6A20827 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: 2208.1 lumens
Efficiency: N/A
Efficacy: 67.3 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

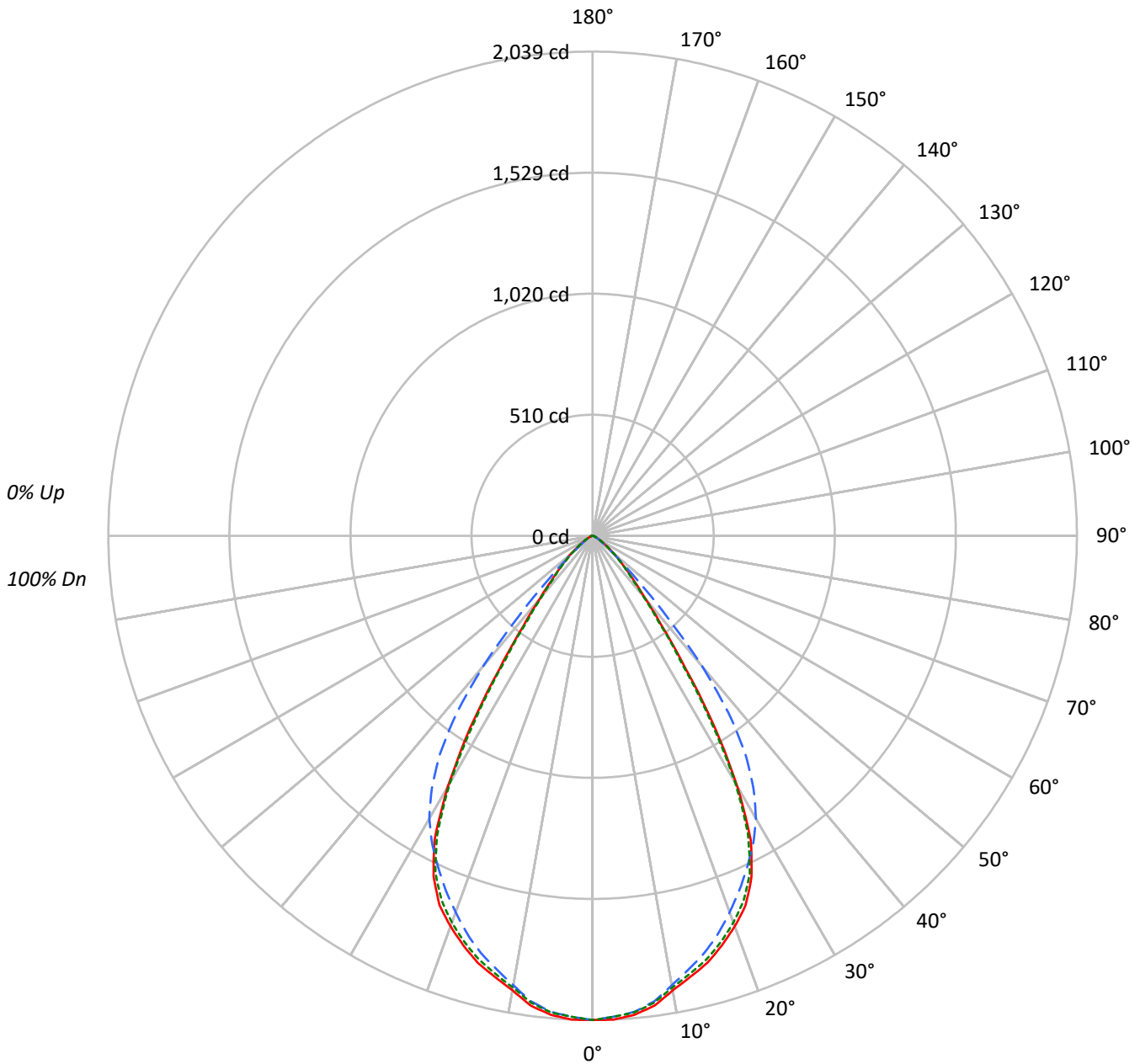
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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																			
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°	87808	87808	87808
5°	87508	86976	87084
10°	84983	84016	84445
15°	83038	81072	82383
20°	80188	77269	79404
25°	75227	73127	74410
30°	60565	68365	59714
35°	35947	58879	34270
40°	19425	40091	18463
45°	12087	16867	11642
50°	8045	6564	7556
55°	4782	3498	4601
60°	2954	2325	2747
65°	1752	1498	1752
70°	1234	1234	932
75°	815	815	815
80°	620	620	620
85°	0	1235	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.5	8.6
10°-20°	515.2	23.3
20°-30°	704.6	31.9
30°-40°	533.6	24.2
40°-50°	185.3	8.4
50°-60°	55.5	2.5
60°-70°	17.6	0.8
70°-80°	5.5	0.2
80°-90°	1.4	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°	1409.3	63.8
0°-40°	1942.9	88.0
0°-60°	2183.6	98.9
0°-90°	2208.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2208.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2039	2039	2039	2039	2039	
5°	2025	2017	2012	2015	2015	191
15°	1863	1840	1819	1835	1848	523
25°	1584	1560	1539	1552	1566	710
35°	684	835	1120	824	652	445
45°	198	212	277	208	191	161
55°	64	61	47	60	61	61
65°	17	17	15	17	17	19
75°	5	5	5	5	5	5
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°	2039.4	2039.4	2039.4	2039.4	2039.4	2039.4	2039.4	2039.4	2039.4	2039.4	2039.4
2.5°	2039.4	2029.6	2019.8	2027.1	2036.9	2024.7	2027.1	2027.1	2019.8	2027.1	2022.2
5°	2024.7	2017.3	2007.5	2014.9	2022.2	2012.4	2012.4	2012.4	2007.5	2012.4	2010.0
7.5°	1995.3	1985.5	1975.7	1983.0	1990.4	1980.6	1978.1	1980.6	1973.2	1978.1	1975.7
10°	1943.8	1936.4	1926.6	1934.0	1938.9	1926.6	1924.2	1926.6	1916.8	1921.7	1921.7
12.5°	1902.1	1897.2	1885.0	1889.9	1892.3	1880.1	1875.2	1875.2	1865.4	1870.3	1867.8
15°	1862.9	1855.5	1843.3	1845.7	1848.2	1831.0	1826.1	1823.7	1813.9	1818.8	1816.3
17.5°	1809.0	1804.1	1789.4	1791.8	1789.4	1774.7	1764.9	1762.4	1752.6	1757.5	1752.6
20°	1750.1	1742.8	1728.1	1725.6	1720.7	1703.6	1696.2	1693.8	1681.5	1686.4	1684.0
22.5°	1684.0	1674.2	1659.5	1657.0	1652.1	1632.5	1625.1	1620.2	1610.4	1615.3	1610.4
25°	1583.5	1576.1	1563.9	1563.9	1566.3	1554.1	1551.6	1549.1	1536.9	1539.3	1536.9
27.5°	1441.3	1436.4	1431.5	1433.9	1446.2	1446.2	1458.5	1463.4	1458.5	1463.4	1458.5
30°	1218.2	1220.7	1235.4	1250.1	1279.5	1301.6	1331.0	1353.1	1362.9	1375.1	1365.3
32.5°	958.4	951.1	980.5	1014.8	1061.4	1110.4	1169.2	1215.8	1247.7	1259.9	1245.2
35°	683.9	681.4	708.4	745.2	799.1	870.2	958.4	1039.3	1095.7	1120.2	1095.7
37.5°	478.0	480.4	495.1	519.7	561.3	622.6	715.7	816.2	902.0	938.8	897.1
40°	345.6	343.2	353.0	367.7	392.2	431.4	495.1	578.5	664.3	713.3	659.4
42.5°	259.8	257.4	262.3	269.6	281.9	301.5	335.8	379.9	433.9	468.2	426.5
45°	198.5	198.5	198.5	203.4	208.4	215.7	228.0	242.7	262.3	277.0	257.4
47.5°	154.4	154.4	154.4	156.9	159.3	159.3	159.3	156.9	159.3	161.8	156.9
50°	120.1	120.1	120.1	120.1	120.1	117.7	112.8	102.9	100.5	98.0	98.0
52.5°	85.8	85.8	85.8	88.2	90.7	85.8	78.4	71.1	66.2	66.2	66.2
55°	63.7	63.7	63.7	63.7	63.7	58.8	53.9	49.0	46.6	46.6	46.6
57.5°	46.6	46.6	46.6	46.6	44.1	41.7	39.2	36.8	34.3	34.3	34.3
60°	34.3	34.3	34.3	34.3	31.9	29.4	29.4	27.0	27.0	27.0	27.0
62.5°	24.5	24.5	24.5	24.5	24.5	22.1	22.1	19.6	19.6	19.6	19.6
65°	17.2	17.2	17.2	17.2	17.2	17.2	14.7	14.7	14.7	14.7	14.7
67.5°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
70°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
72.5°	4.9	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
75°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
77.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
80°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
82.5°	0.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5	2.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5
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°	2039.4	2039.4	2039.4	2039.4	2039.4	2039.4	2039.4	2039.4
2.5°	2022.2	2034.5	2034.5	2024.7	2017.3	2029.6	2032.0	2027.1
5°	2010.0	2019.8	2019.8	2010.0	2002.6	2017.3	2017.3	2014.9
7.5°	1975.7	1987.9	1985.5	1978.1	1970.8	1983.0	1987.9	1983.0
10°	1921.7	1934.0	1934.0	1926.6	1919.3	1934.0	1936.4	1931.5
12.5°	1870.3	1882.5	1887.4	1880.1	1877.6	1889.9	1894.8	1889.9
15°	1818.8	1833.5	1835.9	1833.5	1833.5	1848.2	1853.1	1848.2
17.5°	1757.5	1772.2	1777.1	1774.7	1777.1	1791.8	1799.2	1794.3
20°	1686.4	1698.7	1703.6	1703.6	1706.0	1725.6	1735.4	1733.0
22.5°	1610.4	1625.1	1632.5	1634.9	1637.4	1657.0	1666.8	1661.9
25°	1539.3	1551.6	1551.6	1551.6	1549.1	1563.9	1571.2	1566.3
27.5°	1453.6	1456.0	1448.7	1431.5	1419.2	1424.1	1429.0	1416.8
30°	1345.7	1331.0	1304.0	1267.3	1235.4	1223.1	1220.7	1201.1
32.5°	1208.4	1166.8	1110.4	1046.7	990.3	960.9	948.6	926.5
35°	1031.9	953.5	865.3	781.9	718.2	686.3	674.1	652.0
37.5°	806.4	708.4	615.2	544.2	502.5	475.5	468.2	455.9
40°	561.3	482.9	421.6	377.5	350.5	338.3	335.8	328.5
42.5°	370.1	326.0	294.1	272.1	259.8	252.5	252.5	247.6
45°	237.8	223.1	213.3	203.4	196.1	193.6	193.6	191.2
47.5°	154.4	156.9	156.9	154.4	149.5	147.1	149.5	147.1
50°	102.9	110.3	115.2	117.7	115.2	112.8	115.2	112.8
52.5°	71.1	78.4	85.8	88.2	85.8	83.3	83.3	83.3
55°	49.0	53.9	58.8	61.3	61.3	61.3	61.3	61.3
57.5°	36.8	39.2	41.7	44.1	46.6	44.1	46.6	44.1
60°	27.0	29.4	31.9	31.9	34.3	34.3	34.3	31.9
62.5°	19.6	22.1	22.1	24.5	24.5	24.5	24.5	24.5
65°	14.7	14.7	17.2	17.2	17.2	17.2	17.2	17.2
67.5°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
70°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	7.4
72.5°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	4.9
75°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
77.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
80°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
82.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
85°	2.5	2.5	0.0	2.5	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)