

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: P136907

Luminaire Tested: **LDSQ6A20D010TE ESQ6A20940 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136907
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 ESQ6A20940 6LSQ1H
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2231.3 lumens
Efficiency: N/A
Efficacy: 68.0 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

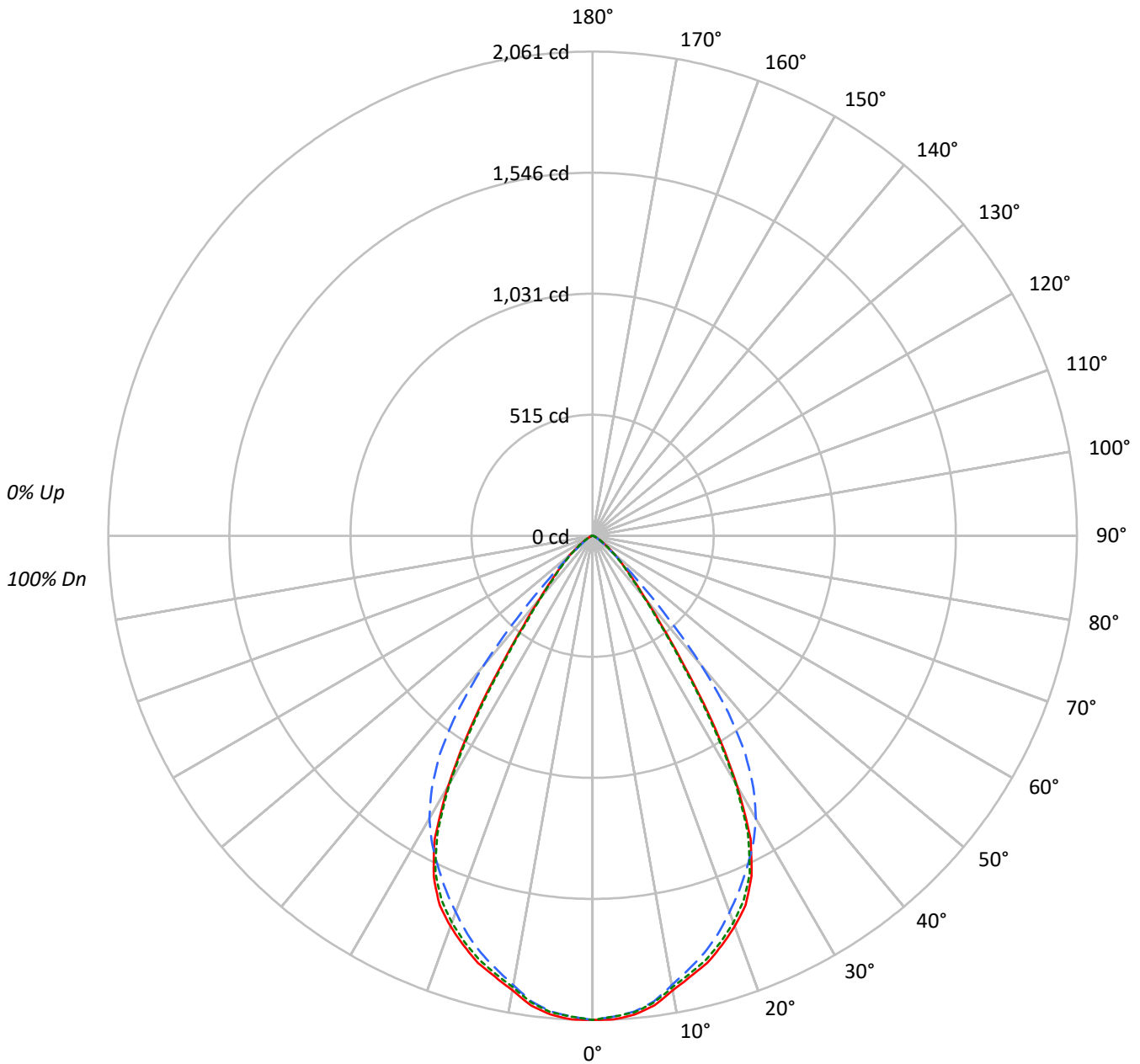
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	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°	88733	88733	88733
5°	88428	87892	88000
10°	85875	84900	85337
15°	83911	81923	83247
20°	81035	78080	80238
25°	76015	73897	75194
30°	61206	69081	60341
35°	36320	59494	34633
40°	19632	40513	18654
45°	12215	17043	11764
50°	8125	6638	7636
55°	4834	3528	4654
60°	2988	2351	2773
65°	1762	1508	1762
70°	1246	1246	944
75°	832	832	832
80°	620	620	620
85°	0	1235	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.5	8.6
10°-20°	520.6	23.3
20°-30°	712.0	31.9
30°-40°	539.2	24.2
40°-50°	187.2	8.4
50°-60°	56.0	2.5
60°-70°	17.8	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°	1424.1	63.8
0°-40°	1963.4	88.0
0°-60°	2206.6	98.9
0°-90°	2231.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2231.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2061	2061	2061	2061	2061	
5°	2046	2039	2034	2036	2036	193
15°	1882	1859	1838	1854	1868	529
25°	1600	1577	1556	1568	1583	717
35°	691	843	1132	832	659	449
45°	201	214	280	211	193	163
55°	64	62	47	61	62	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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CATALOG NUMBER: LDSQ6A20D010TE ESQ6A20940 6LSQ1H

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2060.9	2060.9	2060.9	2060.9	2060.9	2060.9	2060.9	2060.9	2060.9	2060.9	2060.9
2.5°	2060.9	2051.0	2041.0	2048.5	2058.4	2046.0	2048.5	2048.5	2041.0	2048.5	2043.5
5°	2046.0	2038.5	2028.7	2036.1	2043.5	2033.6	2033.6	2033.6	2028.7	2033.6	2031.2
7.5°	2016.2	2006.4	1996.4	2003.9	2011.3	2001.4	1998.9	2001.4	1994.0	1998.9	1996.4
10°	1964.2	1956.9	1946.9	1954.4	1959.2	1946.9	1944.4	1946.9	1937.0	1941.9	1941.9
12.5°	1922.2	1917.2	1904.8	1909.7	1912.2	1899.9	1894.9	1894.9	1885.0	1889.9	1887.4
15°	1882.5	1875.1	1862.7	1865.2	1867.6	1850.3	1845.4	1842.9	1832.9	1837.9	1835.4
17.5°	1828.0	1823.1	1808.2	1810.7	1808.2	1793.4	1783.4	1780.9	1771.1	1776.0	1771.1
20°	1768.6	1761.1	1746.3	1743.8	1738.8	1721.5	1714.1	1711.6	1699.2	1704.1	1701.6
22.5°	1701.6	1691.8	1676.9	1674.4	1669.5	1649.6	1642.3	1637.3	1627.4	1632.3	1627.4
25°	1600.1	1592.7	1580.3	1580.3	1582.8	1570.4	1568.0	1565.5	1553.1	1555.5	1553.1
27.5°	1456.5	1451.5	1446.5	1449.0	1461.5	1461.5	1473.8	1478.8	1473.8	1478.8	1473.8
30°	1231.1	1233.5	1248.4	1263.2	1293.0	1315.2	1345.0	1367.3	1377.2	1389.5	1379.7
32.5°	968.5	961.1	990.8	1025.4	1072.6	1122.1	1181.5	1228.6	1260.7	1273.2	1258.3
35°	691.0	688.6	715.8	753.0	807.5	879.3	968.5	1050.3	1107.2	1131.9	1107.2
37.5°	483.0	485.5	500.4	525.1	567.2	629.2	723.3	824.8	911.5	948.6	906.6
40°	349.3	346.8	356.7	371.6	396.3	435.9	500.4	584.5	671.3	720.8	666.3
42.5°	262.6	260.1	265.1	272.5	284.9	304.6	339.4	383.9	438.4	473.1	431.0
45°	200.6	200.6	200.6	205.6	210.6	218.0	230.3	245.3	265.1	279.9	260.1
47.5°	156.1	156.1	156.1	158.5	161.0	161.0	161.0	158.5	161.0	163.5	158.5
50°	121.3	121.3	121.3	121.3	121.3	118.9	114.0	104.0	101.5	99.1	99.1
52.5°	86.7	86.7	86.7	89.2	91.6	86.7	79.3	71.8	66.8	66.8	66.8
55°	64.4	64.4	64.4	64.4	64.4	59.5	54.5	49.5	47.0	47.0	47.0
57.5°	47.0	47.0	47.0	47.0	44.6	42.1	39.6	37.2	34.7	34.7	34.7
60°	34.7	34.7	34.7	34.7	32.2	29.7	29.7	27.3	27.3	27.3	27.3
62.5°	24.8	24.8	24.8	24.8	24.8	22.3	22.3	19.8	19.8	19.8	19.8
65°	17.3	17.3	17.3	17.3	17.3	17.3	14.8	14.8	14.8	14.8	14.8
67.5°	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
70°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
72.5°	5.0	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
75°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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°	2060.9	2060.9	2060.9	2060.9	2060.9	2060.9	2060.9	2060.9
2.5°	2043.5	2055.9	2055.9	2046.0	2038.5	2051.0	2053.4	2048.5
5°	2031.2	2041.0	2041.0	2031.2	2023.7	2038.5	2038.5	2036.1
7.5°	1996.4	2008.9	2006.4	1998.9	1991.5	2003.9	2008.9	2003.9
10°	1941.9	1954.4	1954.4	1946.9	1939.5	1954.4	1956.9	1951.9
12.5°	1889.9	1902.4	1907.2	1899.9	1897.4	1909.7	1914.7	1909.7
15°	1837.9	1852.8	1855.2	1852.8	1852.8	1867.6	1872.6	1867.6
17.5°	1776.0	1790.9	1795.8	1793.4	1795.8	1810.7	1818.1	1813.1
20°	1704.1	1716.6	1721.5	1721.5	1724.0	1743.8	1753.7	1751.2
22.5°	1627.4	1642.3	1649.6	1652.1	1654.6	1674.4	1684.3	1679.4
25°	1555.5	1568.0	1568.0	1568.0	1565.5	1580.3	1587.8	1582.8
27.5°	1468.8	1471.3	1463.9	1446.5	1434.2	1439.1	1444.0	1431.7
30°	1359.9	1345.0	1317.7	1280.6	1248.4	1236.0	1233.5	1213.7
32.5°	1221.2	1179.1	1122.1	1057.7	1000.7	971.0	958.6	936.3
35°	1042.8	963.6	874.3	790.2	725.8	693.5	681.2	658.9
37.5°	815.0	715.8	621.7	549.9	507.7	480.5	473.1	460.7
40°	567.2	487.9	426.1	381.4	354.2	341.8	339.4	331.9
42.5°	374.1	329.4	297.3	274.9	262.6	255.1	255.1	250.1
45°	240.3	225.4	215.5	205.6	198.1	195.6	195.6	193.2
47.5°	156.1	158.5	158.5	156.1	151.1	148.6	151.1	148.6
50°	104.0	111.5	116.4	118.9	116.4	114.0	116.4	114.0
52.5°	71.8	79.3	86.7	89.2	86.7	84.2	84.2	84.2
55°	49.5	54.5	59.5	62.0	62.0	62.0	62.0	62.0
57.5°	37.2	39.6	42.1	44.6	47.0	44.6	47.0	44.6
60°	27.3	29.7	32.2	32.2	34.7	34.7	34.7	32.2
62.5°	19.8	22.3	22.3	24.8	24.8	24.8	24.8	24.8
65°	14.8	14.8	17.3	17.3	17.3	17.3	17.3	17.3
67.5°	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
70°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	7.5
72.5°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	5.0
75°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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)