

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: P136928

Luminaire Tested: **LDSQ6A30D010TE ESQ6A30927 6LSQ1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136928  
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: LDSQ6A30D010TE ESQ6A30927 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: 2361.9 lumens  
Efficiency: N/A  
Efficacy: 52.0 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

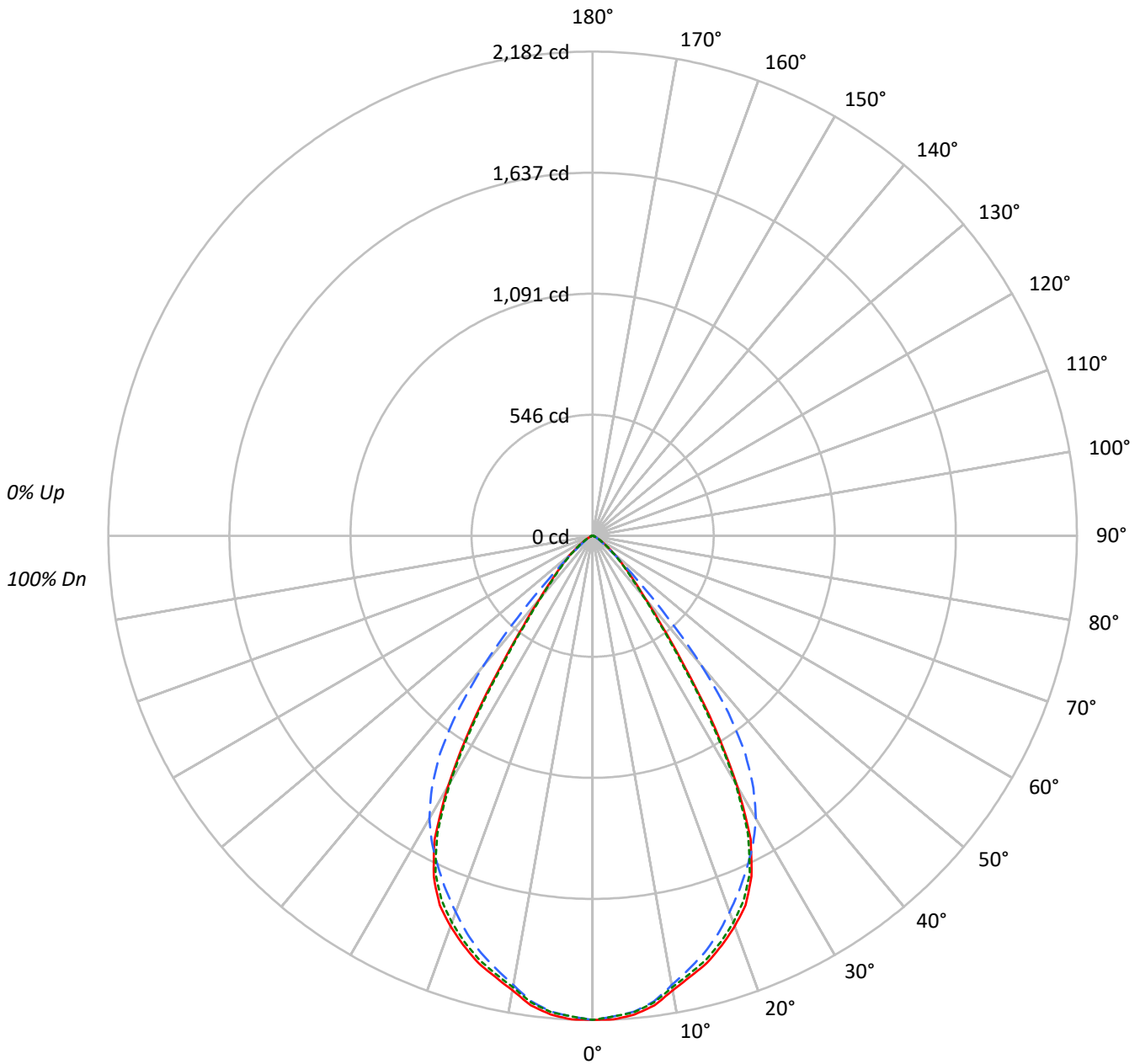
Input Watts (W): 45.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	93926	93926	93926
5°	93606	93044	93152
10°	90907	89875	90334
15°	88828	86724	88124
20°	85782	82657	84939
25°	80472	78229	79597
30°	64785	73133	63876
35°	38454	62984	36656
40°	20779	42885	19745
45°	12933	18042	12452
50°	8607	7026	8078
55°	5119	3738	4924
60°	3160	2489	2936
65°	1875	1599	1875
70°	1322	1322	995
75°	865	865	865
80°	645	645	645
85°	0	1284	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	202.7	8.6
10°-20°	551.1	23.3
20°-30°	753.7	31.9
30°-40°	570.8	24.2
40°-50°	198.2	8.4
50°-60°	59.3	2.5
60°-70°	18.8	0.8
70°-80°	5.8	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°	1507.5	63.8
0°-40°	2078.4	88.0
0°-60°	2335.9	98.9
0°-90°	2361.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2361.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2182	2182	2182	2182	2182	
5°	2166	2158	2153	2155	2155	204
15°	1993	1968	1946	1963	1977	560
25°	1694	1669	1647	1660	1676	759
35°	732	893	1198	881	697	476
45°	212	227	296	223	204	173
55°	68	66	50	64	66	65
65°	18	18	16	18	18	20
75°	5	5	5	5	5	5
85°	0	0	3	1	0	0
90°	0	0	0	0	0	



TEST NUMBER: P136928

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5
2.5°	2181.5	2171.1	2160.6	2168.5	2179.0	2165.8	2168.5	2168.5	2160.6	2168.5	2163.2
5°	2165.8	2158.0	2147.5	2155.3	2163.2	2152.8	2152.8	2152.8	2147.5	2152.8	2150.1
7.5°	2134.3	2123.9	2113.4	2121.3	2129.1	2118.6	2116.0	2118.6	2110.8	2116.0	2113.4
10°	2079.3	2071.4	2060.9	2068.9	2074.1	2060.9	2058.4	2060.9	2050.4	2055.7	2055.7
12.5°	2034.7	2029.5	2016.4	2021.7	2024.2	2011.2	2005.9	2005.9	1995.4	2000.7	1998.0
15°	1992.8	1984.9	1971.8	1974.5	1977.0	1958.7	1953.5	1950.8	1940.3	1945.6	1943.0
17.5°	1935.1	1929.8	1914.1	1916.8	1914.1	1898.4	1887.9	1885.3	1874.8	1880.0	1874.8
20°	1872.2	1864.3	1848.6	1845.9	1840.7	1822.3	1814.5	1811.8	1798.7	1804.0	1801.3
22.5°	1801.3	1790.8	1775.1	1772.5	1767.3	1746.3	1738.4	1733.1	1722.7	1727.9	1722.7
25°	1693.9	1685.9	1672.9	1672.9	1675.5	1662.4	1659.7	1657.2	1644.0	1646.7	1644.0
27.5°	1541.8	1536.5	1531.3	1533.9	1547.0	1547.0	1560.1	1565.3	1560.1	1565.3	1560.1
30°	1303.1	1305.8	1321.6	1337.3	1368.7	1392.3	1423.8	1447.4	1457.9	1471.0	1460.5
32.5°	1025.2	1017.4	1048.9	1085.6	1135.3	1187.8	1250.7	1300.6	1334.6	1347.8	1332.0
35°	731.6	728.9	757.8	797.1	854.8	930.8	1025.2	1111.8	1172.1	1198.3	1172.1
37.5°	511.3	513.9	529.6	555.8	600.5	666.0	765.6	873.2	964.9	1004.2	959.7
40°	369.7	367.1	377.6	393.3	419.5	461.5	529.6	618.8	710.6	763.0	705.3
42.5°	277.9	275.4	280.6	288.4	301.6	322.5	359.3	406.4	464.1	500.8	456.2
45°	212.4	212.4	212.4	217.7	222.9	230.7	243.9	259.6	280.6	296.3	275.4
47.5°	165.2	165.2	165.2	167.8	170.5	170.5	170.5	167.8	170.5	173.0	167.8
50°	128.5	128.5	128.5	128.5	128.5	125.9	120.6	110.1	107.5	104.9	104.9
52.5°	91.8	91.8	91.8	94.4	97.1	91.8	83.9	76.1	70.8	70.8	70.8
55°	68.2	68.2	68.2	68.2	68.2	62.9	57.7	52.4	49.8	49.8	49.8
57.5°	49.8	49.8	49.8	49.8	47.2	44.6	42.0	39.4	36.7	36.7	36.7
60°	36.7	36.7	36.7	36.7	34.1	31.5	31.5	28.9	28.9	28.9	28.9
62.5°	26.2	26.2	26.2	26.2	26.2	23.6	23.6	21.0	21.0	21.0	21.0
65°	18.4	18.4	18.4	18.4	18.4	18.4	15.7	15.7	15.7	15.7	15.7
67.5°	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
70°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
72.5°	5.2	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
75°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
77.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
82.5°	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6	2.6
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°	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5
2.5°	2163.2	2176.3	2176.3	2165.8	2158.0	2171.1	2173.7	2168.5
5°	2150.1	2160.6	2160.6	2150.1	2142.3	2158.0	2158.0	2155.3
7.5°	2113.4	2126.5	2123.9	2116.0	2108.1	2121.3	2126.5	2121.3
10°	2055.7	2068.9	2068.9	2060.9	2053.1	2068.9	2071.4	2066.2
12.5°	2000.7	2013.7	2019.0	2011.2	2008.5	2021.7	2026.9	2021.7
15°	1945.6	1961.3	1964.0	1961.3	1961.3	1977.0	1982.3	1977.0
17.5°	1880.0	1895.8	1901.0	1898.4	1901.0	1916.8	1924.6	1919.4
20°	1804.0	1817.1	1822.3	1822.3	1825.0	1845.9	1856.4	1853.8
22.5°	1722.7	1738.4	1746.3	1748.9	1751.5	1772.5	1783.0	1777.8
25°	1646.7	1659.7	1659.7	1659.7	1657.2	1672.9	1680.7	1675.5
27.5°	1554.9	1557.5	1549.6	1531.3	1518.1	1523.4	1528.6	1515.6
30°	1439.5	1423.8	1395.0	1355.6	1321.6	1308.4	1305.8	1284.8
32.5°	1292.7	1248.1	1187.8	1119.6	1059.4	1027.9	1014.7	991.2
35°	1103.9	1020.0	925.6	836.4	768.3	734.1	721.1	697.4
37.5°	862.7	757.8	658.2	582.1	537.5	508.7	500.8	487.7
40°	600.5	516.6	451.0	403.8	375.0	361.8	359.3	351.3
42.5°	396.0	348.8	314.6	291.1	277.9	270.1	270.1	264.9
45°	254.4	238.6	228.2	217.7	209.8	207.2	207.2	204.5
47.5°	165.2	167.8	167.8	165.2	160.0	157.3	160.0	157.3
50°	110.1	118.0	123.3	125.9	123.3	120.6	123.3	120.6
52.5°	76.1	83.9	91.8	94.4	91.8	89.1	89.1	89.1
55°	52.4	57.7	62.9	65.6	65.6	65.6	65.6	65.6
57.5°	39.4	42.0	44.6	47.2	49.8	47.2	49.8	47.2
60°	28.9	31.5	34.1	34.1	36.7	36.7	36.7	34.1
62.5°	21.0	23.6	23.6	26.2	26.2	26.2	26.2	26.2
65°	15.7	15.7	18.4	18.4	18.4	18.4	18.4	18.4
67.5°	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
70°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	7.9
72.5°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	5.2
75°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
77.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
82.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
85°	2.6	2.6	0.0	2.6	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)