

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: P136929

Luminaire Tested: **LDSQ6A30D010TE ESQ6A30930 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136929
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 ESQ6A30930 6LSQ1H
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: 2472.4 lumens
Efficiency: N/A
Efficacy: 54.5 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

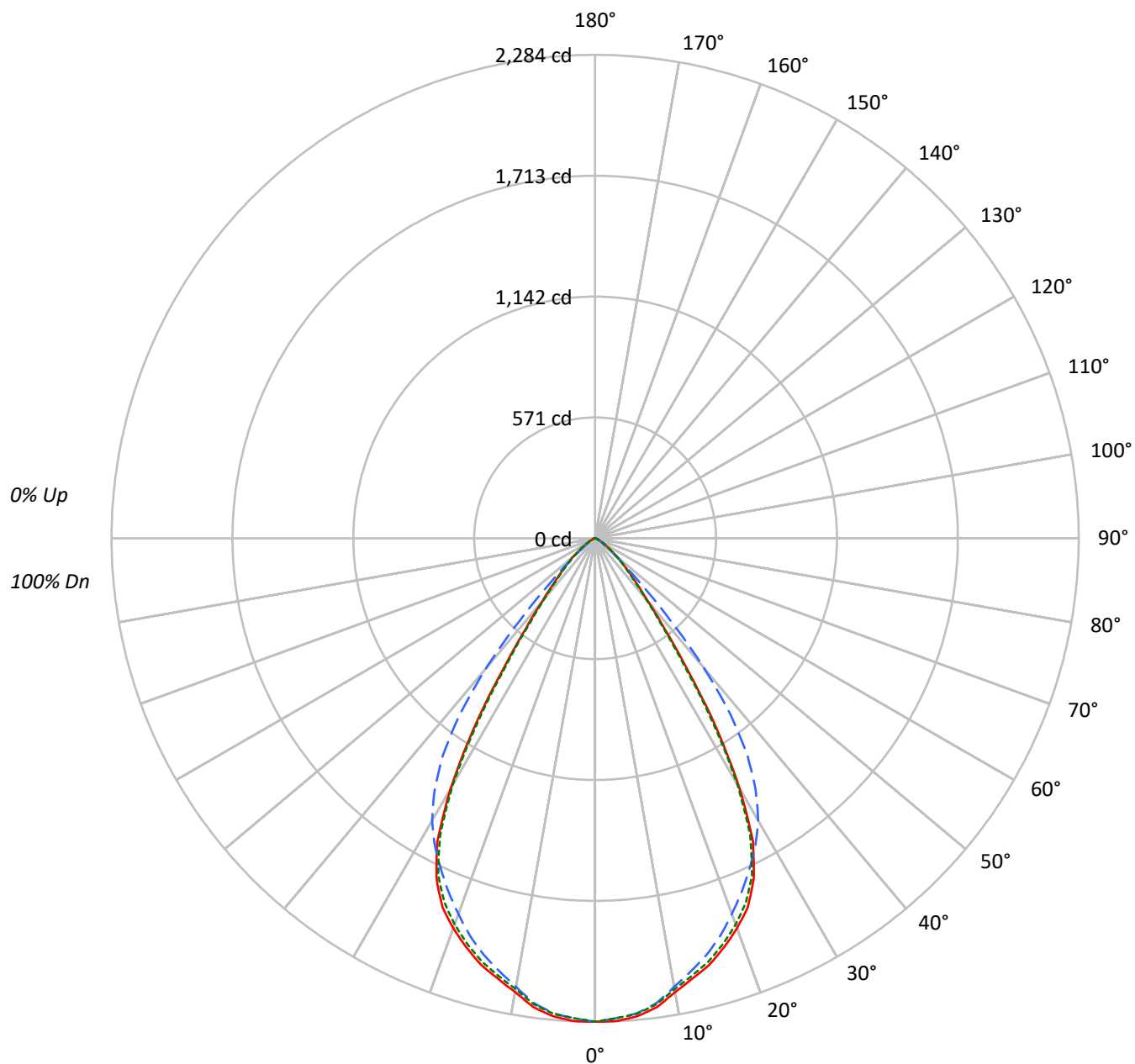
Input Watts (W): 45.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P136929

CATALOG NUMBER: LDSQ6A30D010TE ESQ6A30930 6LSQ1H

Luminous Intensity Polar Plot





TEST NUMBER: P136929

CATALOG NUMBER: LDSQ6A30D010TE ESQ6A30930 6LSQ1H

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	98322	98322	98322
5°	97989	97392	97509
10°	95161	94076	94557
15°	92982	90776	92247
20°	89796	86524	88912
25°	84229	81887	83322
30°	67818	76553	66864
35°	40246	65933	38375
40°	21751	44891	20672
45°	13536	18882	13037
50°	9009	7355	8460
55°	5360	3911	5157
60°	3307	2601	3074
65°	1956	1671	1956
70°	1385	1385	1032
75°	915	915	915
80°	669	669	669
85°	0	1334	0



TEST NUMBER: P136929

CATALOG NUMBER: LDSQ6A30D010TE ESQ6A30930 6LSQ1H

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.2	8.6
10°-20°	576.9	23.3
20°-30°	789.0	31.9
30°-40°	597.5	24.2
40°-50°	207.4	8.4
50°-60°	62.1	2.5
60°-70°	19.7	0.8
70°-80°	6.1	0.2
80°-90°	1.5	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°	1578.0	63.8
0°-40°	2175.6	88.0
0°-60°	2445.1	98.9
0°-90°	2472.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2472.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2284	2284	2284	2284	2284	
5°	2267	2259	2253	2256	2256	214
15°	2086	2060	2036	2054	2070	586
25°	1773	1747	1724	1737	1754	795
35°	766	935	1254	922	730	498
45°	222	237	310	233	214	181
55°	71	69	52	67	69	68
65°	19	19	16	19	19	21
75°	6	6	6	6	6	5
85°	0	0	3	1	0	0
90°	0	0	0	0	0	



TEST NUMBER: P136929

CATALOG NUMBER: LDSQ6A30D010TE ESQ6A30930 6LSQ1H

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2283.6	2283.6	2283.6	2283.6	2283.6	2283.6	2283.6	2283.6	2283.6	2283.6	2283.6
2.5°	2283.6	2272.6	2261.7	2269.9	2280.9	2267.2	2269.9	2269.9	2261.7	2269.9	2264.4
5°	2267.2	2258.9	2247.9	2256.1	2264.4	2253.4	2253.4	2253.4	2247.9	2253.4	2250.6
7.5°	2234.2	2223.2	2212.2	2220.5	2228.7	2217.8	2214.9	2217.8	2209.5	2214.9	2212.2
10°	2176.6	2168.3	2157.3	2165.5	2171.0	2157.3	2154.6	2157.3	2146.4	2151.8	2151.8
12.5°	2129.9	2124.4	2110.7	2116.2	2118.9	2105.2	2099.7	2099.7	2088.8	2094.2	2091.5
15°	2086.0	2077.7	2064.0	2066.8	2069.5	2050.3	2044.8	2042.1	2031.1	2036.5	2033.8
17.5°	2025.6	2020.1	2003.7	2006.4	2003.7	1987.1	1976.2	1973.4	1962.5	1968.0	1962.5
20°	1959.8	1951.4	1935.0	1932.3	1926.8	1907.5	1899.3	1896.6	1882.9	1888.4	1885.6
22.5°	1885.6	1874.7	1858.1	1855.4	1849.9	1828.0	1819.7	1814.2	1803.3	1808.7	1803.3
25°	1773.0	1764.8	1751.1	1751.1	1753.9	1740.2	1737.4	1734.7	1720.9	1723.7	1720.9
27.5°	1613.9	1608.4	1603.0	1605.7	1619.4	1619.4	1633.1	1638.6	1633.1	1638.6	1633.1
30°	1364.1	1366.9	1383.4	1399.8	1432.8	1457.4	1490.4	1515.1	1526.1	1539.8	1528.8
32.5°	1073.1	1064.9	1097.9	1136.3	1188.5	1243.3	1309.2	1361.4	1397.1	1410.8	1394.3
35°	765.7	763.0	793.2	834.4	894.7	974.4	1073.1	1163.8	1226.9	1254.4	1226.9
37.5°	535.2	537.9	554.5	581.9	628.5	697.2	801.4	914.0	1010.1	1051.2	1004.6
40°	387.0	384.3	395.2	411.7	439.2	483.1	554.5	647.8	743.8	798.7	738.3
42.5°	291.0	288.2	293.7	301.9	315.6	337.6	376.1	425.5	485.8	524.2	477.6
45°	222.3	222.3	222.3	227.8	233.3	241.6	255.3	271.7	293.7	310.1	288.2
47.5°	172.9	172.9	172.9	175.7	178.4	178.4	178.4	175.7	178.4	181.1	175.7
50°	134.5	134.5	134.5	134.5	134.5	131.7	126.3	115.3	112.6	109.8	109.8
52.5°	96.0	96.0	96.0	98.8	101.5	96.0	87.8	79.6	74.1	74.1	74.1
55°	71.4	71.4	71.4	71.4	71.4	65.9	60.3	54.9	52.1	52.1	52.1
57.5°	52.1	52.1	52.1	52.1	49.4	46.7	43.9	41.2	38.4	38.4	38.4
60°	38.4	38.4	38.4	38.4	35.7	33.0	33.0	30.2	30.2	30.2	30.2
62.5°	27.5	27.5	27.5	27.5	27.5	24.7	24.7	22.0	22.0	22.0	22.0
65°	19.2	19.2	19.2	19.2	19.2	19.2	16.4	16.4	16.4	16.4	16.4
67.5°	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
70°	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
72.5°	5.5	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
75°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
77.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
82.5°	0.0	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7	2.7
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: P136929

CATALOG NUMBER: LDSQ6A30D010TE ESQ6A30930 6LSQ1H

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2283.6	2283.6	2283.6	2283.6	2283.6	2283.6	2283.6	2283.6
2.5°	2264.4	2278.1	2278.1	2267.2	2258.9	2272.6	2275.4	2269.9
5°	2250.6	2261.7	2261.7	2250.6	2242.4	2258.9	2258.9	2256.1
7.5°	2212.2	2226.0	2223.2	2214.9	2206.7	2220.5	2226.0	2220.5
10°	2151.8	2165.5	2165.5	2157.3	2149.1	2165.5	2168.3	2162.8
12.5°	2094.2	2107.9	2113.4	2105.2	2102.5	2116.2	2121.6	2116.2
15°	2036.5	2053.1	2055.8	2053.1	2053.1	2069.5	2075.0	2069.5
17.5°	1968.0	1984.4	1989.9	1987.1	1989.9	2006.4	2014.6	2009.1
20°	1888.4	1902.1	1907.5	1907.5	1910.4	1932.3	1943.2	1940.5
22.5°	1803.3	1819.7	1828.0	1830.7	1833.5	1855.4	1866.4	1860.9
25°	1723.7	1737.4	1737.4	1737.4	1734.7	1751.1	1759.4	1753.9
27.5°	1627.6	1630.3	1622.1	1603.0	1589.2	1594.6	1600.1	1586.4
30°	1506.8	1490.4	1460.2	1419.0	1383.4	1369.6	1366.9	1344.9
32.5°	1353.2	1306.5	1243.3	1172.0	1108.8	1076.0	1062.2	1037.5
35°	1155.5	1067.7	968.9	875.6	804.2	768.6	754.8	730.1
37.5°	903.0	793.2	688.9	609.3	562.7	532.5	524.2	510.5
40°	628.5	540.7	472.1	422.7	392.5	378.8	376.1	367.8
42.5°	414.4	365.0	329.4	304.7	291.0	282.7	282.7	277.2
45°	266.2	249.8	238.7	227.8	219.6	216.8	216.8	214.1
47.5°	172.9	175.7	175.7	172.9	167.4	164.7	167.4	164.7
50°	115.3	123.5	129.0	131.7	129.0	126.3	129.0	126.3
52.5°	79.6	87.8	96.0	98.8	96.0	93.3	93.3	93.3
55°	54.9	60.3	65.9	68.7	68.7	68.7	68.7	68.7
57.5°	41.2	43.9	46.7	49.4	52.1	49.4	52.1	49.4
60°	30.2	33.0	35.7	35.7	38.4	38.4	38.4	35.7
62.5°	22.0	24.7	24.7	27.5	27.5	27.5	27.5	27.5
65°	16.4	16.4	19.2	19.2	19.2	19.2	19.2	19.2
67.5°	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
70°	11.0	11.0	11.0	11.0	11.0	11.0	11.0	8.2
72.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	5.5
75°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
77.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
82.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
85°	2.7	2.7	0.0	2.7	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)