

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: P136930

Luminaire Tested: **LDSQ6A30D010TE ESQ6A30935 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136930
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 ESQ6A30935 6LSQ1H
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2536.3 lumens
Efficiency: N/A
Efficacy: 55.9 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

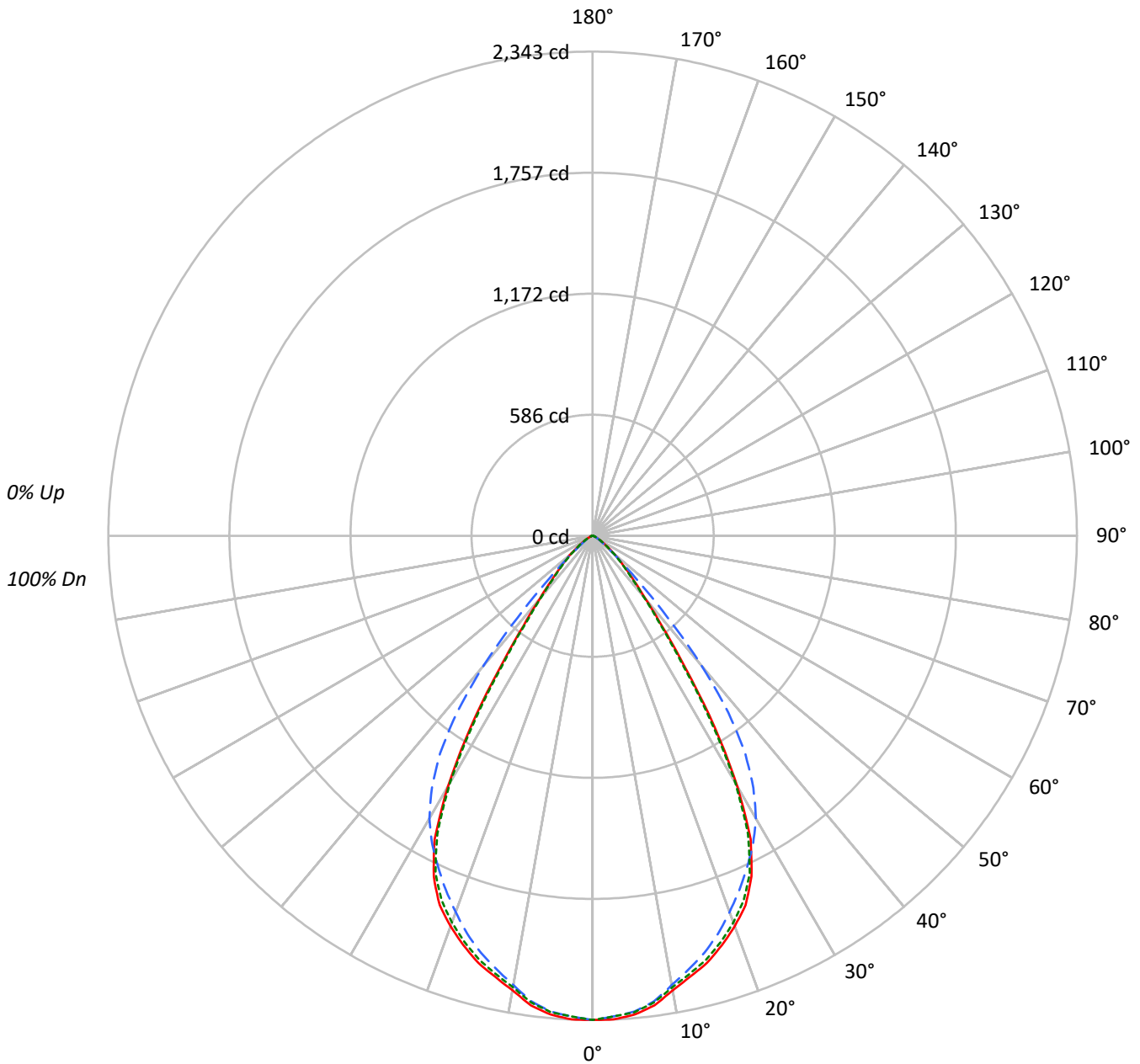
Input Watts (W): 45.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	100866	100866	100866
5°	100521	99908	100033
10°	97618	96512	97006
15°	95385	93125	94632
20°	92110	88760	91212
25°	86410	84001	85474
30°	69573	78532	68589
35°	41287	67636	39363
40°	22313	46049	21206
45°	13889	19375	13371
50°	9244	7549	8681
55°	5495	4016	5285
60°	3393	2669	3152
65°	2007	1722	2007
70°	1410	1410	1070
75°	948	948	948
80°	694	694	694
85°	0	1383	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.7	8.6
10°-20°	591.8	23.3
20°-30°	809.4	31.9
30°-40°	613.0	24.2
40°-50°	212.8	8.4
50°-60°	63.7	2.5
60°-70°	20.2	0.8
70°-80°	6.3	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°	1618.8	63.8
0°-40°	2231.8	88.0
0°-60°	2508.3	98.9
0°-90°	2536.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2536.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2343	2343	2343	2343	2343	
5°	2326	2317	2312	2314	2314	219
15°	2140	2113	2089	2108	2123	601
25°	1819	1792	1768	1782	1799	815
35°	786	959	1287	946	749	511
45°	228	244	318	239	220	185
55°	73	70	54	69	70	70
65°	20	20	17	20	20	21
75°	6	6	6	6	6	6
85°	0	0	3	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°	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7
2.5°	2342.7	2331.3	2320.1	2328.5	2339.8	2325.8	2328.5	2328.5	2320.1	2328.5	2322.9
5°	2325.8	2317.3	2306.1	2314.5	2322.9	2311.6	2311.6	2311.6	2306.1	2311.6	2308.9
7.5°	2291.9	2280.7	2269.4	2277.8	2286.3	2275.0	2272.3	2275.0	2266.6	2272.3	2269.4
10°	2232.8	2224.3	2213.1	2221.5	2227.2	2213.1	2210.3	2213.1	2201.9	2207.5	2207.5
12.5°	2185.0	2179.3	2165.3	2170.8	2173.7	2159.6	2153.9	2153.9	2142.7	2148.4	2145.6
15°	2139.9	2131.5	2117.3	2120.2	2123.0	2103.3	2097.7	2094.9	2083.6	2089.2	2086.4
17.5°	2078.0	2072.3	2055.4	2058.3	2055.4	2038.5	2027.3	2024.5	2013.2	2018.8	2013.2
20°	2010.3	2001.9	1985.0	1982.2	1976.6	1956.9	1948.4	1945.6	1931.5	1937.2	1934.4
22.5°	1934.4	1923.1	1906.2	1903.4	1897.8	1875.2	1866.8	1861.2	1849.9	1855.5	1849.9
25°	1818.9	1810.5	1796.4	1796.4	1799.2	1785.1	1782.3	1779.5	1765.4	1768.2	1765.4
27.5°	1655.6	1650.0	1644.3	1647.1	1661.2	1661.2	1675.4	1680.9	1675.4	1680.9	1675.4
30°	1399.4	1402.2	1419.1	1436.0	1469.7	1495.1	1528.9	1554.2	1565.5	1579.6	1568.4
32.5°	1100.9	1092.5	1126.3	1165.7	1219.2	1275.5	1343.1	1396.5	1433.1	1447.3	1430.4
35°	785.5	782.7	813.8	855.9	917.9	999.6	1100.9	1193.8	1258.6	1286.8	1258.6
37.5°	549.1	551.9	568.8	596.9	644.8	715.2	822.2	937.7	1036.2	1078.4	1030.5
40°	397.0	394.2	405.5	422.4	450.5	495.6	568.8	664.5	763.1	819.3	757.4
42.5°	298.5	295.6	301.3	309.7	323.8	346.3	385.7	436.4	498.4	537.8	489.9
45°	228.1	228.1	228.1	233.7	239.3	247.8	261.8	278.7	301.3	318.2	295.6
47.5°	177.4	177.4	177.4	180.2	183.1	183.1	183.1	180.2	183.1	185.8	180.2
50°	138.0	138.0	138.0	138.0	138.0	135.1	129.6	118.2	115.4	112.7	112.7
52.5°	98.5	98.5	98.5	101.3	104.2	98.5	90.1	81.6	76.1	76.1	76.1
55°	73.2	73.2	73.2	73.2	73.2	67.6	61.9	56.3	53.5	53.5	53.5
57.5°	53.5	53.5	53.5	53.5	50.7	47.8	45.0	42.3	39.4	39.4	39.4
60°	39.4	39.4	39.4	39.4	36.6	33.8	33.8	31.0	31.0	31.0	31.0
62.5°	28.1	28.1	28.1	28.1	28.1	25.4	25.4	22.6	22.6	22.6	22.6
65°	19.7	19.7	19.7	19.7	19.7	19.7	16.9	16.9	16.9	16.9	16.9
67.5°	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1
70°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
72.5°	5.7	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
75°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
77.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
80°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
82.5°	0.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.8	2.8	2.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.8	2.8
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°	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7	2342.7
2.5°	2322.9	2337.0	2337.0	2325.8	2317.3	2331.3	2334.2	2328.5
5°	2308.9	2320.1	2320.1	2308.9	2300.4	2317.3	2317.3	2314.5
7.5°	2269.4	2283.5	2280.7	2272.3	2263.8	2277.8	2283.5	2277.8
10°	2207.5	2221.5	2221.5	2213.1	2204.6	2221.5	2224.3	2218.8
12.5°	2148.4	2162.4	2168.1	2159.6	2156.8	2170.8	2176.5	2170.8
15°	2089.2	2106.1	2108.9	2106.1	2106.1	2123.0	2128.7	2123.0
17.5°	2018.8	2035.7	2041.4	2038.5	2041.4	2058.3	2066.7	2061.1
20°	1937.2	1951.3	1956.9	1956.9	1959.7	1982.2	1993.4	1990.7
22.5°	1849.9	1866.8	1875.2	1878.0	1880.9	1903.4	1914.7	1909.0
25°	1768.2	1782.3	1782.3	1782.3	1779.5	1796.4	1804.8	1799.2
27.5°	1669.7	1672.5	1664.0	1644.3	1630.3	1635.9	1641.6	1627.4
30°	1545.8	1528.9	1498.0	1455.7	1419.1	1405.0	1402.2	1379.6
32.5°	1388.1	1340.3	1275.5	1202.3	1137.5	1103.7	1089.7	1064.3
35°	1185.3	1095.3	993.9	898.2	825.0	788.4	774.3	748.9
37.5°	926.3	813.8	706.8	625.0	577.2	546.2	537.8	523.7
40°	644.8	554.6	484.3	433.6	402.6	388.6	385.7	377.3
42.5°	425.2	374.5	337.9	312.5	298.5	290.0	290.0	284.4
45°	273.1	256.2	245.0	233.7	225.2	222.4	222.4	219.6
47.5°	177.4	180.2	180.2	177.4	171.7	168.9	171.7	168.9
50°	118.2	126.7	132.3	135.1	132.3	129.6	132.3	129.6
52.5°	81.6	90.1	98.5	101.3	98.5	95.8	95.8	95.8
55°	56.3	61.9	67.6	70.4	70.4	70.4	70.4	70.4
57.5°	42.3	45.0	47.8	50.7	53.5	50.7	53.5	50.7
60°	31.0	33.8	36.6	36.6	39.4	39.4	39.4	36.6
62.5°	22.6	25.4	25.4	28.1	28.1	28.1	28.1	28.1
65°	16.9	16.9	19.7	19.7	19.7	19.7	19.7	19.7
67.5°	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1
70°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	8.5
72.5°	8.5	8.5	8.5	8.5	8.5	8.5	8.5	5.7
75°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
77.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
80°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
82.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
85°	2.8	2.8	0.0	2.8	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)