

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: P136931

Luminaire Tested: **LDSQ6A30D010TE ESQ6A30940 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136931
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 ESQ6A30940 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: 2588.3 lumens
Efficiency: N/A
Efficacy: 57.0 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

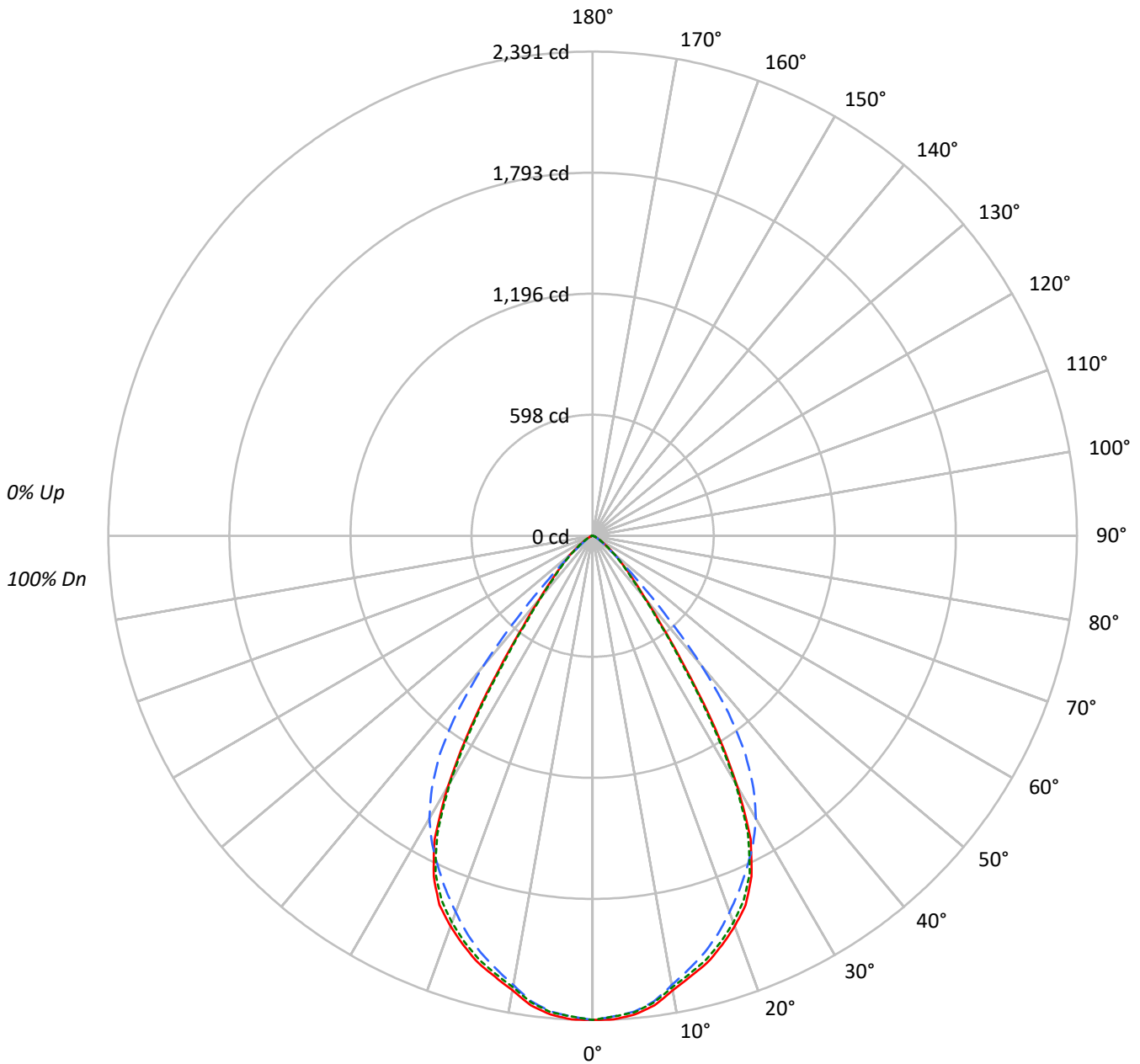
Input Watts (W): 45.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	102933	102933	102933
5°	102579	101961	102082
10°	99624	98488	98991
15°	97342	95037	96571
20°	94002	90579	93081
25°	88182	85726	87227
30°	71000	80143	69996
35°	42138	69023	40178
40°	22774	46993	21639
45°	14169	19771	13645
50°	9431	7696	8855
55°	5607	4099	5397
60°	3470	2721	3212
65°	2048	1762	2048
70°	1448	1448	1083
75°	965	965	965
80°	694	694	694
85°	0	1383	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.2	8.6
10°-20°	603.9	23.3
20°-30°	826.0	31.9
30°-40°	625.5	24.2
40°-50°	217.2	8.4
50°-60°	65.0	2.5
60°-70°	20.6	0.8
70°-80°	6.4	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°	1652.0	63.8
0°-40°	2277.6	88.0
0°-60°	2559.8	98.9
0°-90°	2588.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2588.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2391	2391	2391	2391	2391	
5°	2373	2365	2359	2362	2362	224
15°	2184	2156	2132	2151	2166	613
25°	1856	1829	1804	1819	1836	832
35°	802	978	1313	966	764	521
45°	233	249	325	244	224	189
55°	75	72	55	70	72	71
65°	20	20	17	20	20	22
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°	2390.7	2390.7	2390.7	2390.7	2390.7	2390.7	2390.7	2390.7	2390.7	2390.7	2390.7
2.5°	2390.7	2379.2	2367.7	2376.4	2387.9	2373.4	2376.4	2376.4	2367.7	2376.4	2370.6
5°	2373.4	2364.9	2353.3	2361.9	2370.6	2359.1	2359.1	2359.1	2353.3	2359.1	2356.2
7.5°	2339.0	2327.5	2316.0	2324.6	2333.3	2321.8	2318.8	2321.8	2313.1	2318.8	2316.0
10°	2278.7	2270.0	2258.5	2267.2	2272.9	2258.5	2255.7	2258.5	2247.0	2252.7	2252.7
12.5°	2229.8	2224.1	2209.6	2215.4	2218.3	2203.9	2198.1	2198.1	2186.7	2192.4	2189.6
15°	2183.8	2175.2	2160.8	2163.7	2166.5	2146.5	2140.7	2137.8	2126.4	2132.1	2129.2
17.5°	2120.6	2114.9	2097.6	2100.4	2097.6	2080.4	2068.9	2066.0	2054.5	2060.3	2054.5
20°	2051.6	2043.0	2025.8	2022.9	2017.2	1997.0	1988.4	1985.5	1971.2	1976.9	1974.1
22.5°	1974.1	1962.6	1945.3	1942.4	1936.7	1913.7	1905.1	1899.3	1887.8	1893.6	1887.8
25°	1856.2	1847.6	1833.2	1833.2	1836.1	1821.8	1818.9	1816.0	1801.6	1804.5	1801.6
27.5°	1689.6	1683.8	1678.1	1680.9	1695.3	1695.3	1709.7	1715.4	1709.7	1715.4	1709.7
30°	1428.1	1430.9	1448.2	1465.5	1500.0	1525.8	1560.3	1586.2	1597.7	1612.0	1600.5
32.5°	1123.5	1114.9	1149.4	1189.6	1244.2	1301.7	1370.6	1425.2	1462.5	1477.0	1459.7
35°	801.7	798.8	830.5	873.6	936.7	1020.1	1123.5	1218.3	1284.4	1313.2	1284.4
37.5°	560.3	563.2	580.4	609.2	658.0	729.9	839.0	956.8	1057.4	1100.5	1051.7
40°	405.2	402.3	413.8	431.0	459.8	505.7	580.4	678.1	778.7	836.1	772.9
42.5°	304.6	301.7	307.5	316.1	330.4	353.4	393.7	445.4	508.6	548.8	500.0
45°	232.7	232.7	232.7	238.5	244.2	252.9	267.2	284.5	307.5	324.7	301.7
47.5°	181.0	181.0	181.0	183.9	186.8	186.8	186.8	183.9	186.8	189.6	183.9
50°	140.8	140.8	140.8	140.8	140.8	138.0	132.2	120.7	117.8	114.9	114.9
52.5°	100.6	100.6	100.6	103.4	106.3	100.6	91.9	83.4	77.6	77.6	77.6
55°	74.7	74.7	74.7	74.7	74.7	68.9	63.2	57.4	54.6	54.6	54.6
57.5°	54.6	54.6	54.6	54.6	51.8	48.8	46.0	43.1	40.3	40.3	40.3
60°	40.3	40.3	40.3	40.3	37.3	34.5	34.5	31.6	31.6	31.6	31.6
62.5°	28.8	28.8	28.8	28.8	28.8	25.8	25.8	23.0	23.0	23.0	23.0
65°	20.1	20.1	20.1	20.1	20.1	20.1	17.3	17.3	17.3	17.3	17.3
67.5°	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
70°	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
72.5°	5.8	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
75°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
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°	2390.7	2390.7	2390.7	2390.7	2390.7	2390.7	2390.7	2390.7
2.5°	2370.6	2384.9	2384.9	2373.4	2364.9	2379.2	2382.1	2376.4
5°	2356.2	2367.7	2367.7	2356.2	2347.6	2364.9	2364.9	2361.9
7.5°	2316.0	2330.3	2327.5	2318.8	2310.3	2324.6	2330.3	2324.6
10°	2252.7	2267.2	2267.2	2258.5	2249.9	2267.2	2270.0	2264.2
12.5°	2192.4	2206.8	2212.6	2203.9	2201.1	2215.4	2221.1	2215.4
15°	2132.1	2149.3	2152.2	2149.3	2149.3	2166.5	2172.3	2166.5
17.5°	2060.3	2077.5	2083.2	2080.4	2083.2	2100.4	2109.1	2103.4
20°	1976.9	1991.3	1997.0	1997.0	1999.9	2022.9	2034.3	2031.5
22.5°	1887.8	1905.1	1913.7	1916.6	1919.5	1942.4	1953.9	1948.2
25°	1804.5	1818.9	1818.9	1818.9	1816.0	1833.2	1841.9	1836.1
27.5°	1703.9	1706.9	1698.2	1678.1	1663.8	1669.4	1675.2	1660.8
30°	1577.5	1560.3	1528.6	1485.5	1448.2	1433.9	1430.9	1407.9
32.5°	1416.6	1367.8	1301.7	1227.0	1160.9	1126.4	1112.0	1086.2
35°	1209.7	1117.8	1014.3	916.7	841.9	804.5	790.2	764.4
37.5°	945.3	830.5	721.3	637.9	589.1	557.5	548.8	534.5
40°	658.0	566.1	494.2	442.5	410.9	396.5	393.7	385.0
42.5°	433.9	382.2	344.8	318.9	304.6	296.0	296.0	290.2
45°	278.7	261.5	250.0	238.5	229.9	227.0	227.0	224.1
47.5°	181.0	183.9	183.9	181.0	175.3	172.4	175.3	172.4
50°	120.7	129.3	135.0	138.0	135.0	132.2	135.0	132.2
52.5°	83.4	91.9	100.6	103.4	100.6	97.7	97.7	97.7
55°	57.4	63.2	68.9	71.9	71.9	71.9	71.9	71.9
57.5°	43.1	46.0	48.8	51.8	54.6	51.8	54.6	51.8
60°	31.6	34.5	37.3	37.3	40.3	40.3	40.3	37.3
62.5°	23.0	25.8	25.8	28.8	28.8	28.8	28.8	28.8
65°	17.3	17.3	20.1	20.1	20.1	20.1	20.1	20.1
67.5°	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
70°	11.5	11.5	11.5	11.5	11.5	11.5	11.5	8.6
72.5°	8.6	8.6	8.6	8.6	8.6	8.6	8.6	5.8
75°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
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)