

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: P136786

Luminaire Tested: **LDSQ6A20D010TE ESQ6A20835 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136786
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23378)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQ6A20D010TE ESQ6A20835 6LSQ1LI
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: 2539.0 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 0.92 / 0.93 / 0.95
Luminous Opening: Rectangular (W 0.46' x L: 0.46' x H: 0')
CIE Type: Direct

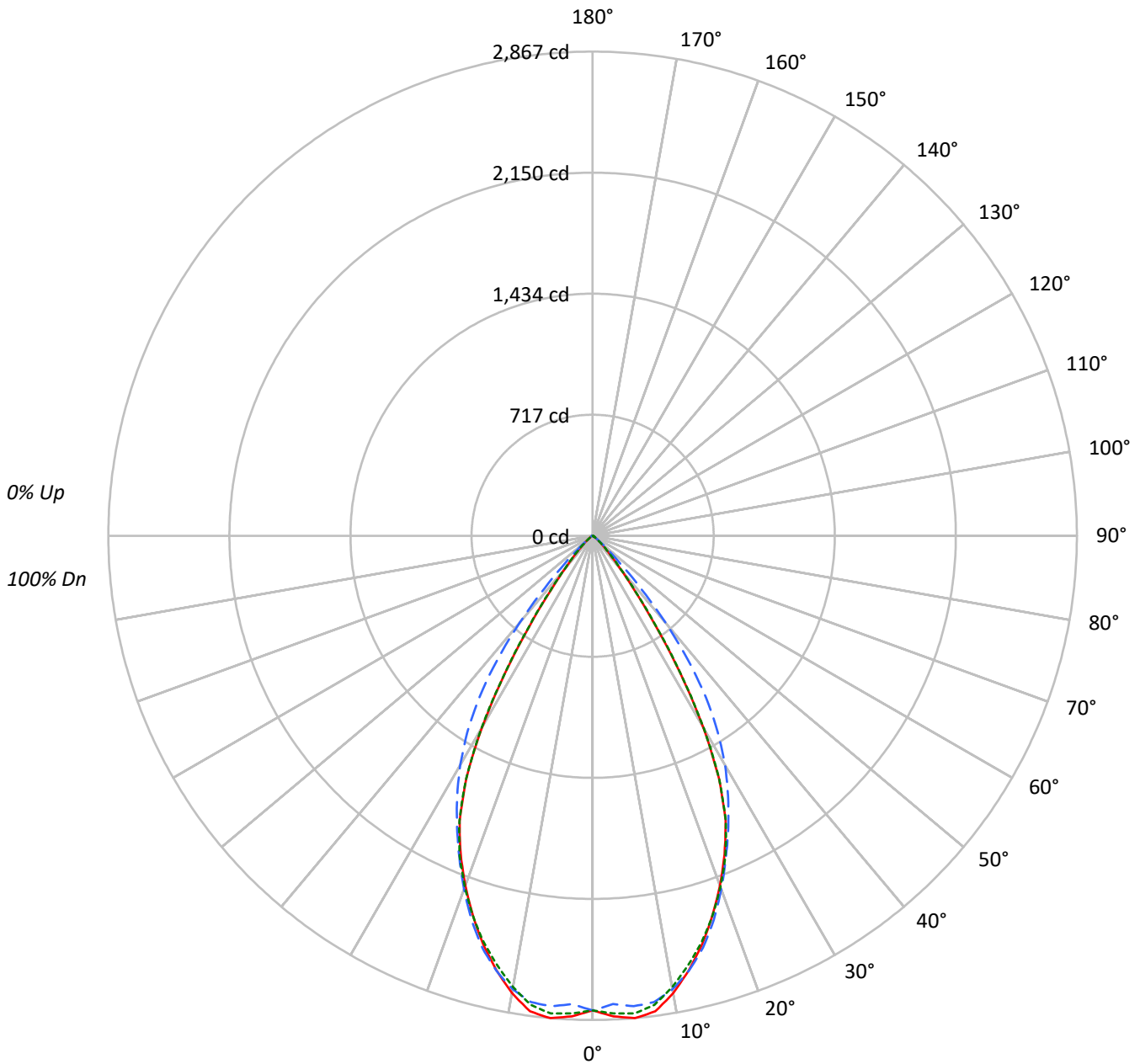
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P136786

CATALOG NUMBER: LDSQ6A20D010TE ESQ6A20835 6LSQ1LI

Luminous Intensity Polar Plot





TEST NUMBER: P136786

CATALOG NUMBER: LDSQ6A20D010TE ESQ6A20835 6LSQ1LI

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94				94
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	91	89	87				87
3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	88	85	83	81				81
4	97	90	84	80	96	89	84	80	87	82	79	85	81	78	83	80	77	75				75
5	92	84	78	74	91	83	78	74	81	77	73	80	76	72	78	75	72	70				70
6	88	79	73	69	86	78	73	69	77	72	68	75	71	68	74	70	67	66				66
7	84	74	68	64	82	74	68	64	72	67	64	71	67	63	70	66	63	62				62
8	79	70	64	60	78	69	64	60	68	63	60	67	63	59	66	62	59	58				58
9	76	66	60	56	75	66	60	56	65	59	56	64	59	56	63	59	56	54				54
10	72	62	57	53	71	62	56	53	61	56	53	60	56	52	60	55	52	51				51

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	144010	144010	144010
5°	147471	143829	146015
10°	143042	141876	141137
15°	132831	133955	132141
20°	120148	121369	120595
25°	105244	107375	105509
30°	77497	92702	77840
35°	40265	73155	41147
40°	16956	44869	17665
45°	7775	16660	8029
50°	3571	4982	3667
55°	1787	2001	1787
60°	1086	1209	1086
65°	715	861	715
70°	524	524	524
75°	238	475	238
80°	354	354	354
85°	0	0	0



TEST NUMBER: P136786

CATALOG NUMBER: LDSQ6A20D010TE ESQ6A20835 6LSQ1LI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.0	10.5
10°-20°	699.2	27.5
20°-30°	854.9	33.7
30°-40°	549.4	21.6
40°-50°	137.1	5.4
50°-60°	23.0	0.9
60°-70°	6.9	0.3
70°-80°	2.1	0.1
80°-90°	0.4	0.0
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°	1820.1	71.7
0°-40°	2369.5	93.3
0°-60°	2529.5	99.6
0°-90°	2539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2539.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2810	2810	2810	2810	2810	
5°	2867	2806	2796	2799	2839	270
15°	2504	2518	2525	2497	2491	699
25°	1862	1912	1899	1918	1866	830
35°	644	849	1170	865	658	426
45°	107	134	230	141	111	93
55°	20	22	22	22	20	20
65°	6	7	7	7	6	6
75°	1	2	2	2	1	2
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



TEST NUMBER: P136786

CATALOG NUMBER: LDSQ6A20D010TE ESQ6A20835 6LSQ1LI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2810.5	2810.5	2810.5	2810.5	2810.5	2810.5	2810.5	2810.5	2810.5	2810.5	2810.5
2.5°	2848.2	2777.5	2832.9	2828.2	2781.0	2790.4	2798.7	2797.5	2796.3	2775.1	2824.6
5°	2867.1	2795.2	2851.7	2844.7	2801.1	2810.5	2815.2	2817.6	2811.7	2796.3	2843.5
7.5°	2840.0	2772.8	2827.0	2818.7	2784.5	2792.8	2796.3	2802.2	2794.0	2785.7	2830.5
10°	2749.2	2692.6	2743.3	2737.4	2715.0	2724.4	2726.8	2736.2	2726.8	2726.8	2766.9
12.5°	2633.6	2590.0	2636.0	2631.3	2623.0	2633.6	2630.1	2646.6	2632.5	2637.2	2673.7
15°	2504.0	2475.7	2513.4	2512.2	2513.4	2521.7	2511.0	2522.8	2509.9	2525.2	2557.0
17.5°	2357.8	2344.8	2374.3	2375.5	2384.9	2387.3	2370.8	2386.1	2367.2	2384.9	2412.0
20°	2203.4	2205.7	2229.3	2225.8	2239.9	2232.8	2209.2	2224.6	2205.7	2225.8	2247.0
22.5°	2040.7	2060.7	2073.7	2071.3	2090.2	2080.7	2051.3	2058.3	2039.5	2061.9	2074.9
25°	1861.5	1883.9	1893.3	1893.3	1913.3	1909.8	1883.9	1895.7	1878.0	1899.2	1906.3
27.5°	1617.4	1645.7	1652.8	1667.0	1701.1	1708.2	1697.6	1721.2	1714.1	1736.5	1734.2
30°	1309.8	1338.0	1348.7	1376.9	1432.4	1465.4	1483.0	1529.0	1540.8	1566.8	1553.8
32.5°	965.5	989.1	1004.4	1046.9	1119.9	1187.1	1247.3	1315.6	1352.2	1380.5	1356.9
35°	643.7	661.4	677.9	730.9	807.5	891.2	978.5	1076.3	1138.8	1169.5	1137.6
37.5°	404.4	416.1	426.8	465.7	527.0	604.8	697.9	809.9	896.0	932.5	892.4
40°	253.5	260.5	266.4	290.0	327.7	374.9	453.9	548.2	636.6	670.8	633.1
42.5°	162.7	166.2	169.8	182.7	202.8	232.2	275.9	334.8	396.1	419.7	394.9
45°	107.3	108.5	109.6	116.7	127.3	141.5	163.9	191.0	220.5	229.9	219.3
47.5°	70.7	70.7	71.9	76.6	82.5	90.8	99.0	106.1	115.5	120.2	114.4
50°	44.8	46.0	47.2	50.7	54.2	57.8	60.1	60.1	62.5	62.5	61.3
52.5°	27.1	27.1	28.3	29.5	34.2	37.7	37.7	35.4	35.4	35.4	34.2
55°	20.0	20.0	20.0	21.2	22.4	22.4	22.4	22.4	22.4	22.4	21.2
57.5°	15.3	15.3	15.3	16.5	16.5	16.5	16.5	15.3	15.3	15.3	15.3
60°	10.6	10.6	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	10.6
62.5°	8.3	8.3	8.3	9.4	9.4	9.4	9.4	9.4	9.4	8.3	8.3
65°	5.9	5.9	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
67.5°	4.7	4.7	4.7	4.7	4.7	4.7	5.9	4.7	4.7	4.7	4.7
70°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
75°	1.2	1.2	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0
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: P136786

CATALOG NUMBER: LDSQ6A20D010TE ESQ6A20835 6LSQ1LI

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2810.5	2810.5	2810.5	2810.5	2810.5	2810.5	2810.5	2810.5
2.5°	2836.4	2840.0	2788.1	2798.7	2836.4	2798.7	2799.9	2830.5
5°	2847.0	2845.9	2792.8	2805.8	2828.2	2801.1	2802.2	2838.8
7.5°	2823.5	2812.8	2759.8	2775.1	2781.0	2762.1	2762.1	2802.2
10°	2750.4	2732.7	2683.2	2698.5	2687.9	2676.1	2672.6	2712.6
12.5°	2654.9	2634.8	2592.4	2606.5	2580.6	2580.6	2570.0	2606.5
15°	2535.8	2518.1	2488.6	2505.1	2466.2	2474.5	2458.0	2491.0
17.5°	2393.2	2381.4	2364.9	2384.9	2338.9	2353.1	2330.7	2359.0
20°	2229.3	2223.4	2221.0	2241.1	2193.9	2217.5	2191.6	2211.6
22.5°	2059.5	2059.5	2072.5	2099.6	2047.7	2073.7	2043.0	2054.8
25°	1892.1	1893.3	1908.6	1927.5	1876.8	1899.2	1865.0	1866.2
27.5°	1714.1	1703.5	1720.0	1716.5	1652.8	1665.8	1629.2	1622.2
30°	1518.4	1486.6	1474.8	1441.8	1369.9	1367.5	1329.8	1315.6
32.5°	1303.9	1243.7	1207.2	1140.0	1048.0	1026.8	992.6	976.1
35°	1065.7	974.9	908.9	820.5	729.7	699.1	672.0	657.8
37.5°	804.0	700.3	624.8	539.9	475.1	450.3	427.9	418.5
40°	548.2	459.8	394.9	338.3	298.3	282.9	270.0	264.1
42.5°	338.3	281.8	244.0	209.8	187.4	179.2	173.3	169.8
45°	193.3	167.4	150.9	132.0	121.4	116.7	113.2	110.8
47.5°	107.3	100.2	94.3	86.1	79.0	75.4	74.3	73.1
50°	60.1	61.3	61.3	56.6	53.1	49.5	47.2	46.0
52.5°	35.4	37.7	38.9	35.4	30.7	28.3	28.3	27.1
55°	22.4	22.4	22.4	22.4	21.2	20.0	20.0	20.0
57.5°	15.3	15.3	16.5	16.5	16.5	15.3	15.3	14.1
60°	11.8	11.8	11.8	11.8	11.8	11.8	10.6	10.6
62.5°	9.4	9.4	9.4	9.4	9.4	8.3	8.3	8.3
65°	7.1	7.1	7.1	7.1	7.1	5.9	5.9	5.9
67.5°	4.7	5.9	4.7	4.7	4.7	4.7	4.7	4.7
70°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
75°	2.4	2.4	2.4	2.4	2.4	1.2	1.2	1.2
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	1.2
85°	0.0	0.0	0.0	0.0	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)