

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: P136808

Luminaire Tested: **LDSQ6A30D010TE ESQ6A30827 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136808
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: LDSQ6A30D010TE ESQ6A30827 6LSQ1LI
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: 2856.0 lumens
Efficiency: N/A
Efficacy: 62.9 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

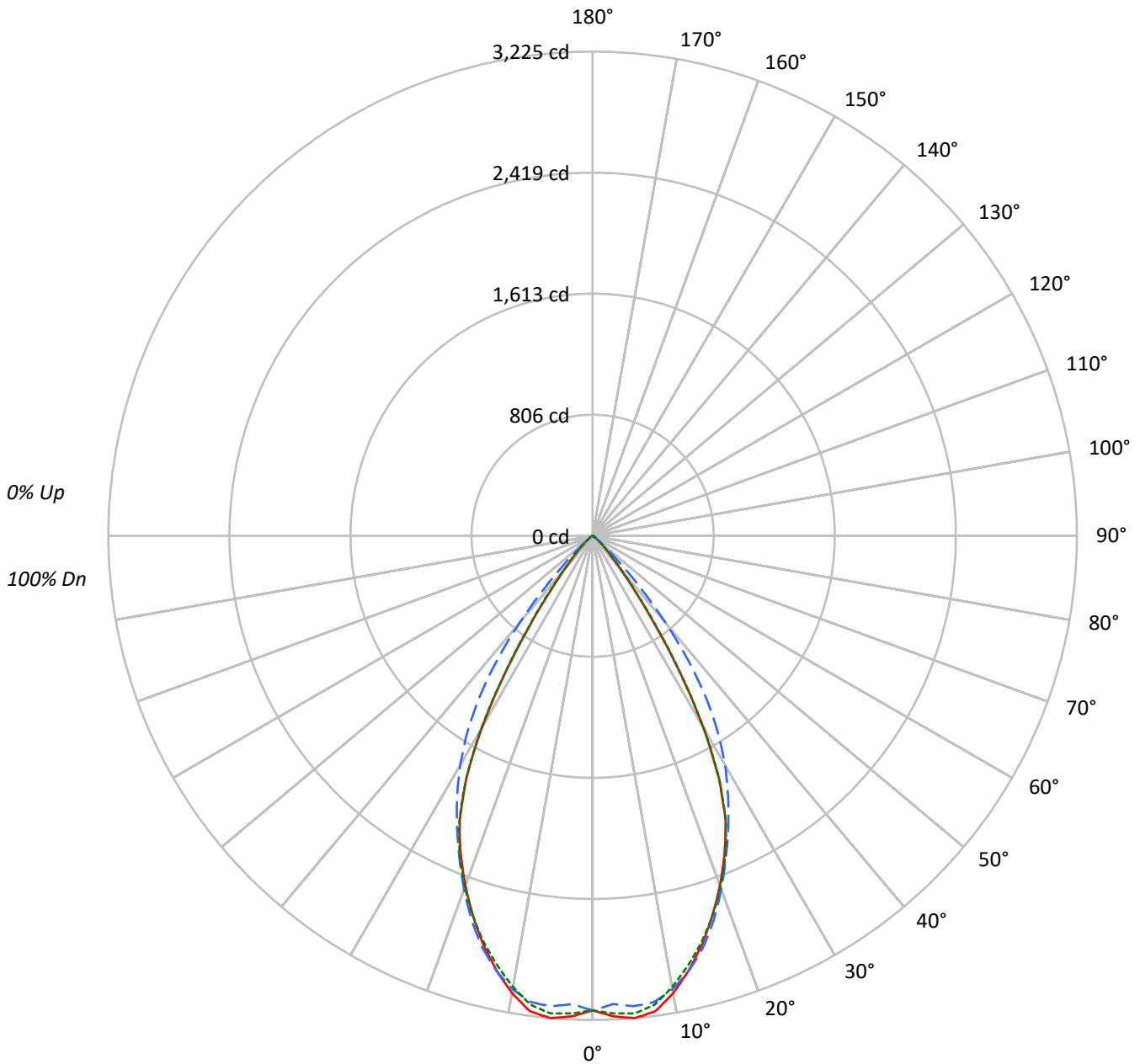
Input Watts (W): 45.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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			
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	91	89	87			
3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	88	85	83	81			
4	97	90	84	80	96	89	84	80	87	82	79	85	81	78	83	80	77	75			
5	92	84	78	74	91	83	78	74	81	77	73	80	76	72	78	75	72	70			
6	88	79	73	69	86	78	73	69	77	72	68	75	71	68	74	70	67	66			
7	84	74	68	64	82	74	68	64	72	67	64	71	67	63	70	66	63	62			
8	79	70	64	60	78	69	64	60	68	63	60	67	63	59	66	62	59	58			
9	76	66	60	56	75	66	60	56	65	59	56	64	59	56	63	59	56	54			
10	72	62	57	53	71	62	56	53	61	56	53	60	56	52	60	55	52	51			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	161990	161990	161990
5°	165880	161791	164244
10°	160899	159587	158760
15°	149413	150681	148639
20°	135143	136517	135650
25°	118383	120780	118682
30°	87170	104275	87561
35°	45288	82288	46289
40°	19070	50468	19866
45°	8746	18739	9036
50°	4018	5604	4121
55°	2010	2251	2010
60°	1220	1363	1220
65°	800	970	800
70°	599	599	599
75°	257	535	257
80°	384	384	384
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.2	10.5
10°-20°	786.5	27.5
20°-30°	961.7	33.7
30°-40°	618.0	21.6
40°-50°	154.2	5.4
50°-60°	25.8	0.9
60°-70°	7.8	0.3
70°-80°	2.4	0.1
80°-90°	0.5	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°	2047.4	71.7
0°-40°	2665.3	93.3
0°-60°	2845.3	99.6
0°-90°	2856.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2856.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3161	3161	3161	3161	3161	
5°	3225	3156	3146	3149	3193	304
15°	2817	2832	2840	2809	2802	786
25°	2094	2150	2136	2158	2099	934
35°	724	955	1316	973	740	479
45°	121	151	259	159	125	104
55°	22	25	25	25	22	22
65°	7	8	8	8	7	7
75°	1	3	3	3	1	2
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3161.4	3161.4	3161.4	3161.4	3161.4	3161.4	3161.4	3161.4	3161.4	3161.4	3161.4
2.5°	3203.8	3124.2	3186.6	3181.3	3128.2	3138.8	3148.1	3146.8	3145.5	3121.6	3177.3
5°	3225.0	3144.1	3207.8	3199.8	3150.8	3161.4	3166.7	3169.3	3162.7	3145.5	3198.5
7.5°	3194.5	3118.9	3179.9	3170.7	3132.2	3141.5	3145.5	3152.1	3142.8	3133.5	3183.9
10°	3092.4	3028.8	3085.8	3079.2	3054.0	3064.6	3067.2	3077.8	3067.2	3067.2	3112.3
12.5°	2962.5	2913.4	2965.1	2959.8	2950.5	2962.5	2958.5	2977.1	2961.1	2966.4	3007.6
15°	2816.6	2784.8	2827.2	2825.9	2827.2	2836.5	2824.6	2837.8	2823.2	2840.5	2876.3
17.5°	2652.2	2637.6	2670.7	2672.1	2682.7	2685.3	2666.8	2684.0	2662.8	2682.7	2713.2
20°	2478.4	2481.1	2507.6	2503.6	2519.6	2511.6	2485.1	2502.3	2481.1	2503.6	2527.5
22.5°	2295.4	2318.0	2332.6	2329.9	2351.1	2340.5	2307.4	2315.3	2294.1	2319.3	2333.9
25°	2093.9	2119.1	2129.7	2129.7	2152.2	2148.3	2119.1	2132.3	2112.4	2136.3	2144.3
27.5°	1819.4	1851.2	1859.2	1875.1	1913.5	1921.5	1909.6	1936.1	1928.1	1953.3	1950.7
30°	1473.3	1505.1	1517.0	1548.9	1611.2	1648.3	1668.2	1719.9	1733.2	1762.4	1747.8
32.5°	1086.1	1112.6	1129.8	1177.6	1259.8	1335.4	1403.0	1479.9	1521.0	1552.8	1526.3
35°	724.0	743.9	762.5	822.2	908.4	1002.5	1100.6	1210.7	1281.0	1315.5	1279.7
37.5°	454.8	468.1	480.0	523.8	592.8	680.3	785.0	911.0	1007.8	1048.9	1003.8
40°	285.1	293.1	299.7	326.2	368.7	421.7	510.5	616.6	716.1	754.5	712.1
42.5°	183.0	187.0	191.0	205.5	228.1	261.2	310.3	376.6	445.6	472.1	444.2
45°	120.7	122.0	123.3	131.3	143.2	159.1	184.3	214.8	248.0	258.6	246.7
47.5°	79.6	79.6	80.9	86.2	92.8	102.1	111.4	119.3	130.0	135.3	128.6
50°	50.4	51.7	53.0	57.0	61.0	65.0	67.6	67.6	70.3	70.3	69.0
52.5°	30.5	30.5	31.8	33.2	38.5	42.4	42.4	39.8	39.8	39.8	38.5
55°	22.5	22.5	22.5	23.9	25.2	25.2	25.2	25.2	25.2	25.2	23.9
57.5°	17.2	17.2	17.2	18.6	18.6	18.6	18.6	17.2	17.2	17.2	17.2
60°	11.9	11.9	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	11.9
62.5°	9.3	9.3	9.3	10.6	10.6	10.6	10.6	10.6	10.6	9.3	9.3
65°	6.6	6.6	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
67.5°	5.3	5.3	5.3	5.3	5.3	5.3	6.6	5.3	5.3	5.3	5.3
70°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
72.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
75°	1.3	1.3	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3161.4	3161.4	3161.4	3161.4	3161.4	3161.4	3161.4	3161.4
2.5°	3190.6	3194.5	3136.2	3148.1	3190.6	3148.1	3149.4	3183.9
5°	3202.5	3201.2	3141.5	3156.1	3181.3	3150.8	3152.1	3193.2
7.5°	3176.0	3164.0	3104.4	3121.6	3128.2	3107.0	3107.0	3152.1
10°	3093.7	3073.9	3018.2	3035.4	3023.5	3010.2	3006.2	3051.3
12.5°	2986.3	2963.8	2916.1	2932.0	2902.8	2902.8	2890.9	2932.0
15°	2852.4	2832.5	2799.4	2817.9	2774.2	2783.4	2764.9	2802.0
17.5°	2691.9	2678.7	2660.1	2682.7	2630.9	2646.9	2621.7	2653.5
20°	2507.6	2501.0	2498.3	2520.9	2467.8	2494.4	2465.2	2487.7
22.5°	2316.7	2316.7	2331.3	2361.8	2303.4	2332.6	2298.1	2311.4
25°	2128.4	2129.7	2146.9	2168.1	2111.1	2136.3	2097.9	2099.2
27.5°	1928.1	1916.2	1934.8	1930.8	1859.2	1873.8	1832.6	1824.7
30°	1708.0	1672.2	1658.9	1621.8	1540.9	1538.3	1495.8	1479.9
32.5°	1466.6	1399.0	1357.9	1282.3	1178.9	1155.0	1116.6	1098.0
35°	1198.8	1096.7	1022.4	923.0	820.8	786.4	755.9	740.0
37.5°	904.4	787.7	702.8	607.3	534.4	506.6	481.4	470.8
40°	616.6	517.2	444.2	380.6	335.5	318.3	303.7	297.0
42.5°	380.6	316.9	274.5	236.0	210.8	201.6	194.9	191.0
45°	217.5	188.3	169.7	148.5	136.6	131.3	127.3	124.7
47.5°	120.7	112.7	106.1	96.8	88.8	84.9	83.5	82.2
50°	67.6	69.0	69.0	63.7	59.7	55.7	53.0	51.7
52.5°	39.8	42.4	43.8	39.8	34.5	31.8	31.8	30.5
55°	25.2	25.2	25.2	25.2	23.9	22.5	22.5	22.5
57.5°	17.2	17.2	18.6	18.6	18.6	17.2	17.2	15.9
60°	13.3	13.3	13.3	13.3	13.3	13.3	11.9	11.9
62.5°	10.6	10.6	10.6	10.6	10.6	9.3	9.3	9.3
65°	8.0	8.0	8.0	8.0	8.0	6.6	6.6	6.6
67.5°	5.3	6.6	5.3	5.3	5.3	5.3	5.3	5.3
70°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
72.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
75°	2.7	2.7	2.7	2.7	2.7	1.3	1.3	1.3
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	0.0	1.3
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



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— 0°-180° - - 45°-225° - - - - 90°-270°









(END OF REPORT)