

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: P136812

Luminaire Tested: **LDSQ6A30D010TE ESQ6A30927 6LSQ1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136812  
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 ESQ6A30927 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: 2607.6 lumens  
Efficiency: N/A  
Efficacy: 57.4 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

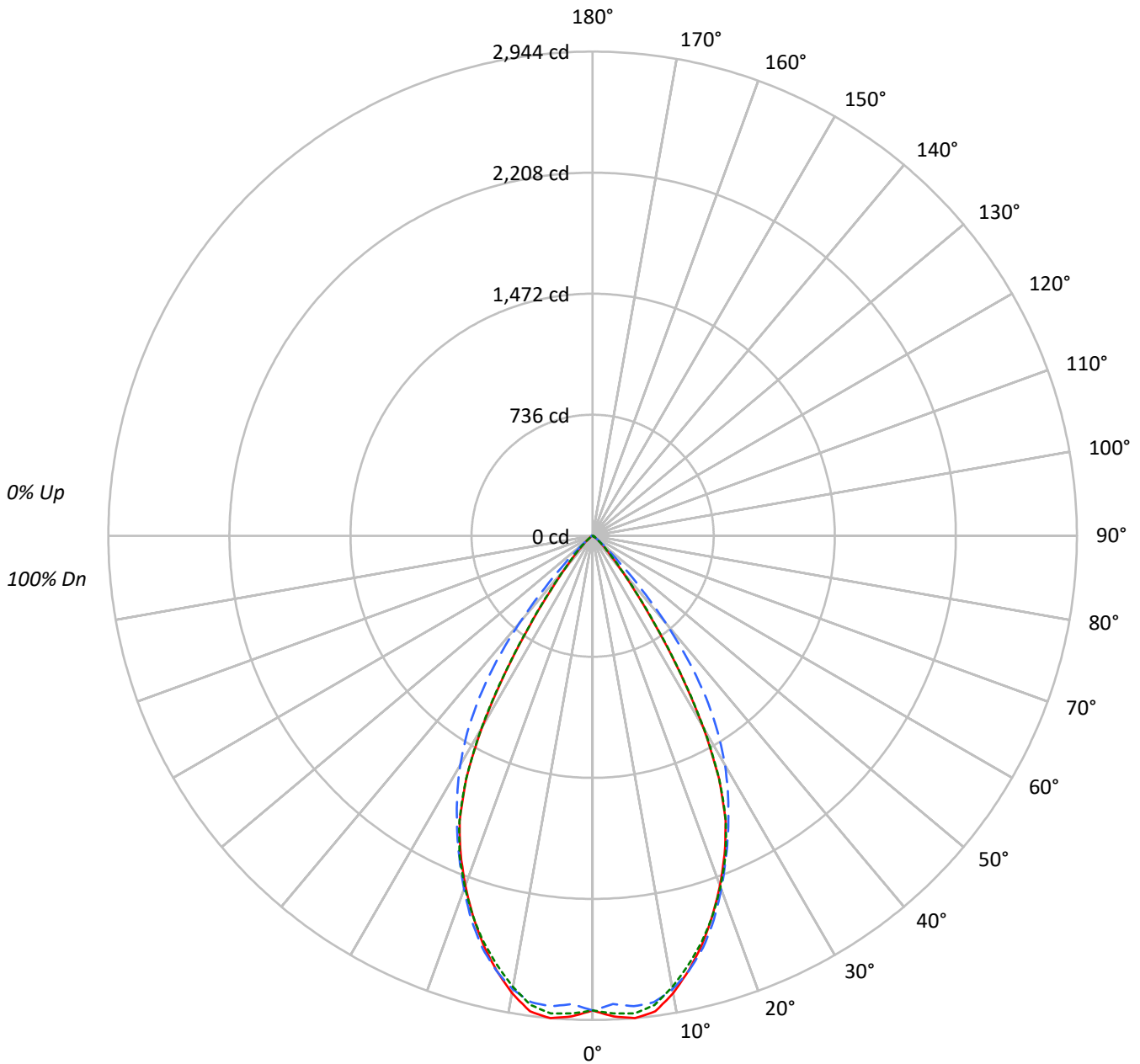
Input Watts (W): 45.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				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°	147899	147899	147899
5°	151447	147713	149955
10°	146902	145706	144946
15°	136417	137573	135706
20°	123387	124641	123850
25°	108082	110270	108359
30°	79585	95205	79940
35°	41347	75132	42260
40°	17411	46080	18140
45°	7986	17109	8254
50°	3667	5118	3763
55°	1831	2055	1831
60°	1117	1240	1117
65°	727	885	727
70°	554	554	554
75°	238	495	238
80°	354	354	354
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	273.2	10.5
10°-20°	718.1	27.5
20°-30°	878.0	33.7
30°-40°	564.2	21.6
40°-50°	140.8	5.4
50°-60°	23.6	0.9
60°-70°	7.1	0.3
70°-80°	2.2	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°	1869.2	71.7
0°-40°	2433.5	93.3
0°-60°	2597.8	99.6
0°-90°	2607.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2607.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2886	2886	2886	2886	2886	
5°	2944	2882	2872	2875	2915	277
15°	2572	2585	2593	2564	2558	718
25°	1912	1963	1950	1970	1917	853
35°	661	872	1201	888	676	437
45°	110	138	236	145	114	95
55°	20	23	23	23	20	20
65°	6	7	7	7	6	7
75°	1	2	2	2	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°	2886.4	2886.4	2886.4	2886.4	2886.4	2886.4	2886.4	2886.4	2886.4	2886.4	2886.4
2.5°	2925.1	2852.4	2909.4	2904.5	2856.0	2865.7	2874.2	2873.0	2871.8	2850.0	2900.9
5°	2944.4	2870.6	2928.7	2921.4	2876.7	2886.4	2891.2	2893.6	2887.5	2871.8	2920.2
7.5°	2916.6	2847.6	2903.2	2894.8	2859.7	2868.2	2871.8	2877.9	2869.4	2860.9	2906.9
10°	2823.4	2765.3	2817.3	2811.3	2788.3	2798.0	2800.4	2810.0	2800.4	2800.4	2841.5
12.5°	2704.8	2659.9	2707.1	2702.3	2693.8	2704.8	2701.1	2718.1	2703.5	2708.3	2745.9
15°	2571.6	2542.5	2581.2	2580.0	2581.2	2589.7	2578.9	2590.9	2577.6	2593.4	2626.1
17.5°	2421.5	2408.1	2438.3	2439.6	2449.3	2451.7	2434.8	2450.5	2431.1	2449.3	2477.2
20°	2262.8	2265.2	2289.4	2285.8	2300.4	2293.1	2268.9	2284.6	2265.2	2285.8	2307.6
22.5°	2095.7	2116.3	2129.7	2127.2	2146.6	2136.9	2106.7	2113.9	2094.5	2117.5	2130.9
25°	1911.7	1934.7	1944.4	1944.4	1965.0	1961.4	1934.7	1946.8	1928.6	1950.4	1957.7
27.5°	1661.1	1690.1	1697.4	1712.0	1747.0	1754.3	1743.5	1767.7	1760.4	1783.4	1781.0
30°	1345.1	1374.2	1385.0	1414.1	1471.0	1504.9	1523.1	1570.3	1582.4	1609.1	1595.7
32.5°	991.6	1015.8	1031.5	1075.1	1150.2	1219.2	1280.9	1351.1	1388.7	1417.7	1393.5
35°	661.0	679.2	696.2	750.7	829.4	915.3	1004.8	1105.4	1169.6	1201.1	1168.4
37.5°	415.2	427.4	438.2	478.2	541.2	621.1	716.7	831.7	920.1	957.6	916.5
40°	260.3	267.6	273.6	297.8	336.6	385.0	466.1	563.0	653.8	688.9	650.1
42.5°	167.1	170.7	174.4	187.6	208.3	238.5	283.3	343.8	406.8	431.0	405.6
45°	110.2	111.4	112.6	119.9	130.7	145.3	168.3	196.1	226.4	236.1	225.2
47.5°	72.7	72.7	73.9	78.7	84.7	93.2	101.7	108.9	118.7	123.5	117.4
50°	46.0	47.2	48.4	52.0	55.7	59.3	61.7	61.7	64.2	64.2	63.0
52.5°	27.8	27.8	29.0	30.3	35.2	38.7	38.7	36.3	36.3	36.3	35.2
55°	20.5	20.5	20.5	21.8	23.0	23.0	23.0	23.0	23.0	23.0	21.8
57.5°	15.7	15.7	15.7	17.0	17.0	17.0	17.0	15.7	15.7	15.7	15.7
60°	10.9	10.9	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	10.9
62.5°	8.5	8.5	8.5	9.7	9.7	9.7	9.7	9.7	9.7	8.5	8.5
65°	6.0	6.0	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
67.5°	4.8	4.8	4.8	4.8	4.8	4.8	6.0	4.8	4.8	4.8	4.8
70°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
72.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
75°	1.2	1.2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2886.4	2886.4	2886.4	2886.4	2886.4	2886.4	2886.4	2886.4
2.5°	2913.0	2916.6	2863.4	2874.2	2913.0	2874.2	2875.4	2906.9
5°	2923.9	2922.7	2868.2	2881.5	2904.5	2876.7	2877.9	2915.4
7.5°	2899.7	2888.7	2834.3	2850.0	2856.0	2836.7	2836.7	2877.9
10°	2824.5	2806.5	2755.6	2771.3	2760.5	2748.3	2744.7	2785.8
12.5°	2726.5	2705.9	2662.4	2676.9	2650.3	2650.3	2639.4	2676.9
15°	2604.2	2586.1	2555.9	2572.7	2532.8	2541.2	2524.4	2558.2
17.5°	2457.7	2445.7	2428.7	2449.3	2402.0	2416.6	2393.6	2422.6
20°	2289.4	2283.4	2280.9	2301.6	2253.1	2277.4	2250.7	2271.3
22.5°	2115.1	2115.1	2128.5	2156.3	2103.0	2129.7	2098.2	2110.3
25°	1943.2	1944.4	1960.1	1979.5	1927.4	1950.4	1915.4	1916.6
27.5°	1760.4	1749.5	1766.5	1762.8	1697.4	1710.8	1673.2	1666.0
30°	1559.4	1526.7	1514.6	1480.7	1406.8	1404.5	1365.7	1351.1
32.5°	1339.0	1277.3	1239.8	1170.7	1076.3	1054.5	1019.5	1002.5
35°	1094.5	1001.3	933.5	842.7	749.4	718.0	690.1	675.6
37.5°	825.7	719.2	641.7	554.5	487.9	462.5	439.5	429.8
40°	563.0	472.2	405.6	347.5	306.3	290.6	277.3	271.2
42.5°	347.5	289.3	250.6	215.5	192.5	184.1	177.9	174.4
45°	198.6	171.9	154.9	135.6	124.7	119.9	116.2	113.9
47.5°	110.2	102.9	96.9	88.4	81.1	77.5	76.2	75.0
50°	61.7	63.0	63.0	58.2	54.5	50.9	48.4	47.2
52.5°	36.3	38.7	40.0	36.3	31.5	29.0	29.0	27.8
55°	23.0	23.0	23.0	23.0	21.8	20.5	20.5	20.5
57.5°	15.7	15.7	17.0	17.0	17.0	15.7	15.7	14.5
60°	12.1	12.1	12.1	12.1	12.1	12.1	10.9	10.9
62.5°	9.7	9.7	9.7	9.7	9.7	8.5	8.5	8.5
65°	7.3	7.3	7.3	7.3	7.3	6.0	6.0	6.0
67.5°	4.8	6.0	4.8	4.8	4.8	4.8	4.8	4.8
70°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
72.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
75°	2.5	2.5	2.5	2.5	2.5	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)