

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: P136814

Luminaire Tested: **LDSQ6A30D010TE ESQ6A30935 6LSQ1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136814  
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 ESQ6A30935 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: 2800.2 lumens  
Efficiency: N/A  
Efficacy: 61.7 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

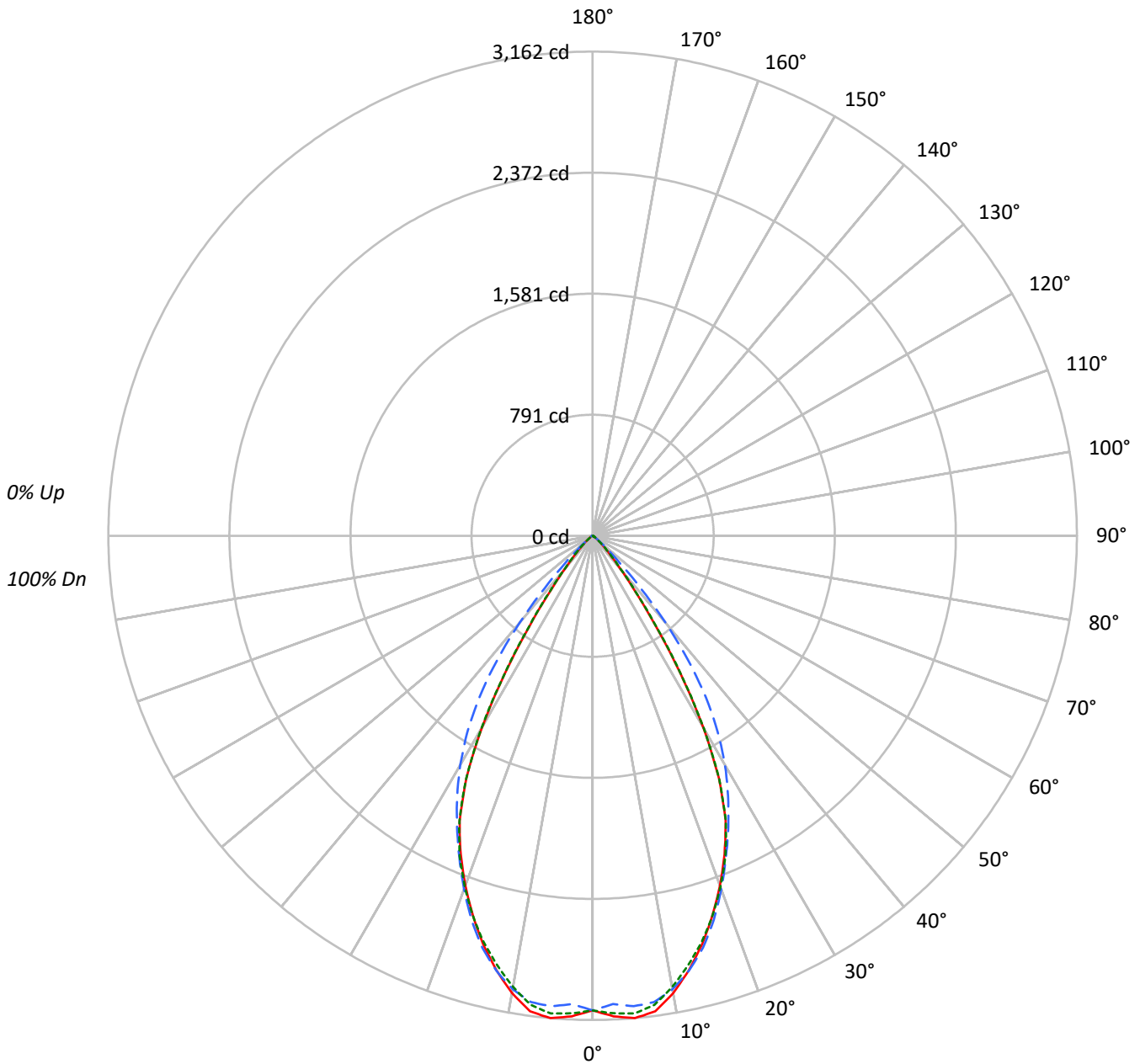
Input Watts (W): 45.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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	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°	158818	158818	158818
5°	162639	158627	161035
10°	157756	156466	155654
15°	146496	147732	145732
20°	132504	133851	133000
25°	116070	118417	116364
30°	85466	102234	85845
35°	44406	80680	45382
40°	18702	49484	19478
45°	8573	18370	8862
50°	3938	5492	4042
55°	1974	2207	1974
60°	1199	1332	1199
65°	788	946	788
70°	584	584	584
75°	257	515	257
80°	384	384	384
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	293.3	10.5
10°-20°	771.1	27.5
20°-30°	942.9	33.7
30°-40°	605.9	21.6
40°-50°	151.2	5.4
50°-60°	25.3	0.9
60°-70°	7.7	0.3
70°-80°	2.3	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°	2007.3	71.7
0°-40°	2613.2	93.3
0°-60°	2789.7	99.6
0°-90°	2800.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2800.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3100	3100	3100	3100	3100	
5°	3162	3094	3084	3087	3131	298
15°	2762	2776	2785	2754	2747	771
25°	2053	2108	2094	2115	2058	916
35°	710	937	1290	954	726	469
45°	118	148	254	156	122	102
55°	22	25	25	25	22	22
65°	6	8	8	8	6	7
75°	1	3	3	3	1	2
85°	0	0	0	0	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°	3099.5	3099.5	3099.5	3099.5	3099.5	3099.5	3099.5	3099.5	3099.5	3099.5	3099.5
2.5°	3141.2	3063.2	3124.3	3119.1	3067.0	3077.4	3086.6	3085.3	3084.0	3060.6	3115.2
5°	3162.0	3082.7	3145.1	3137.3	3089.1	3099.5	3104.7	3107.4	3100.9	3084.0	3136.0
7.5°	3132.0	3058.0	3117.8	3108.7	3071.0	3080.1	3084.0	3090.5	3081.4	3072.2	3121.6
10°	3032.0	2969.5	3025.5	3018.9	2994.3	3004.7	3007.2	3017.6	3007.2	3007.2	3051.4
12.5°	2904.5	2856.4	2907.2	2902.0	2892.8	2904.5	2900.7	2918.9	2903.2	2908.5	2948.7
15°	2761.6	2730.3	2772.0	2770.7	2772.0	2781.0	2769.3	2782.4	2768.0	2784.9	2820.1
17.5°	2600.3	2586.0	2618.5	2619.9	2630.3	2632.8	2614.6	2631.5	2610.7	2630.3	2660.1
20°	2430.0	2432.6	2458.6	2454.7	2470.3	2462.5	2436.5	2453.4	2432.6	2454.7	2478.1
22.5°	2250.5	2272.6	2287.0	2284.4	2305.1	2294.8	2262.3	2270.1	2249.3	2274.0	2288.3
25°	2053.0	2077.6	2088.0	2088.0	2110.1	2106.3	2077.6	2090.7	2071.1	2094.5	2102.4
27.5°	1783.8	1815.0	1822.8	1838.4	1876.1	1884.0	1872.2	1898.2	1890.5	1915.1	1912.6
30°	1444.5	1475.7	1487.4	1518.6	1579.7	1616.1	1635.6	1686.3	1699.3	1727.9	1713.6
32.5°	1064.8	1090.9	1107.7	1154.6	1235.1	1309.2	1375.5	1450.9	1491.3	1522.5	1496.5
35°	709.9	729.4	747.6	806.1	890.6	982.9	1079.2	1187.1	1255.9	1289.8	1254.6
37.5°	445.9	459.0	470.7	513.6	581.2	666.9	769.7	893.2	988.1	1028.4	984.2
40°	279.6	287.3	293.8	319.8	361.5	413.4	500.6	604.6	702.1	739.8	698.2
42.5°	179.4	183.3	187.3	201.5	223.6	256.1	304.2	369.2	436.9	462.9	435.6
45°	118.3	119.6	120.9	128.7	140.4	156.0	180.7	210.6	243.1	253.5	241.9
47.5°	78.0	78.0	79.3	84.5	91.0	100.2	109.2	117.0	127.5	132.7	126.1
50°	49.4	50.7	52.0	55.9	59.8	63.7	66.3	66.3	68.9	68.9	67.7
52.5°	29.9	29.9	31.2	32.5	37.7	41.6	41.6	39.0	39.0	39.0	37.7
55°	22.1	22.1	22.1	23.4	24.7	24.7	24.7	24.7	24.7	24.7	23.4
57.5°	16.9	16.9	16.9	18.2	18.2	18.2	18.2	16.9	16.9	16.9	16.9
60°	11.7	11.7	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	11.7
62.5°	9.1	9.1	9.1	10.4	10.4	10.4	10.4	10.4	10.4	9.1	9.1
65°	6.5	6.5	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
67.5°	5.2	5.2	5.2	5.2	5.2	5.2	6.5	5.2	5.2	5.2	5.2
70°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
72.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
75°	1.3	1.3	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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°	3099.5	3099.5	3099.5	3099.5	3099.5	3099.5	3099.5	3099.5
2.5°	3128.2	3132.0	3074.9	3086.6	3128.2	3086.6	3087.9	3121.6
5°	3139.9	3138.6	3080.1	3094.3	3119.1	3089.1	3090.5	3130.8
7.5°	3113.9	3102.2	3043.7	3060.6	3067.0	3046.3	3046.3	3090.5
10°	3033.3	3013.8	2959.1	2976.1	2964.3	2951.4	2947.4	2991.6
12.5°	2928.0	2905.9	2859.1	2874.7	2846.0	2846.0	2834.3	2874.7
15°	2796.6	2777.2	2744.7	2762.8	2719.9	2729.0	2710.8	2747.2
17.5°	2639.3	2626.3	2608.1	2630.3	2579.5	2595.1	2570.5	2601.6
20°	2458.6	2452.1	2449.5	2471.6	2419.6	2445.6	2417.0	2439.1
22.5°	2271.4	2271.4	2285.7	2315.6	2258.4	2287.0	2253.2	2266.2
25°	2086.8	2088.0	2104.9	2125.7	2069.9	2094.5	2056.9	2058.2
27.5°	1890.5	1878.8	1896.9	1893.0	1822.8	1837.1	1796.8	1789.0
30°	1674.6	1639.5	1626.5	1590.1	1510.7	1508.2	1466.6	1450.9
32.5°	1438.0	1371.7	1331.3	1257.3	1155.9	1132.4	1094.8	1076.5
35°	1175.3	1075.2	1002.4	904.9	804.8	771.0	741.1	725.5
37.5°	886.7	772.3	689.0	595.5	524.0	496.7	471.9	461.5
40°	604.6	507.1	435.6	373.1	329.0	312.1	297.7	291.2
42.5°	373.1	310.7	269.2	231.4	206.7	197.7	191.1	187.3
45°	213.2	184.6	166.4	145.6	133.9	128.7	124.8	122.3
47.5°	118.3	110.5	104.0	95.0	87.1	83.2	81.9	80.6
50°	66.3	67.7	67.7	62.4	58.5	54.6	52.0	50.7
52.5°	39.0	41.6	42.9	39.0	33.8	31.2	31.2	29.9
55°	24.7	24.7	24.7	24.7	23.4	22.1	22.1	22.1
57.5°	16.9	16.9	18.2	18.2	18.2	16.9	16.9	15.6
60°	13.0	13.0	13.0	13.0	13.0	13.0	11.7	11.7
62.5°	10.4	10.4	10.4	10.4	10.4	9.1	9.1	9.1
65°	7.8	7.8	7.8	7.8	7.8	6.5	6.5	6.5
67.5°	5.2	6.5	5.2	5.2	5.2	5.2	5.2	5.2
70°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
72.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
75°	2.6	2.6	2.6	2.6	2.6	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



Report Generated By E9808895 / USPTCWHP6082093







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









(END OF REPORT)