

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: P136810

Luminaire Tested: **LDSQ6A30D010TE ESQ6A30835 6LSQ1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136810  
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 ESQ6A30835 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: 3067.0 lumens  
Efficiency: N/A  
Efficacy: 67.6 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

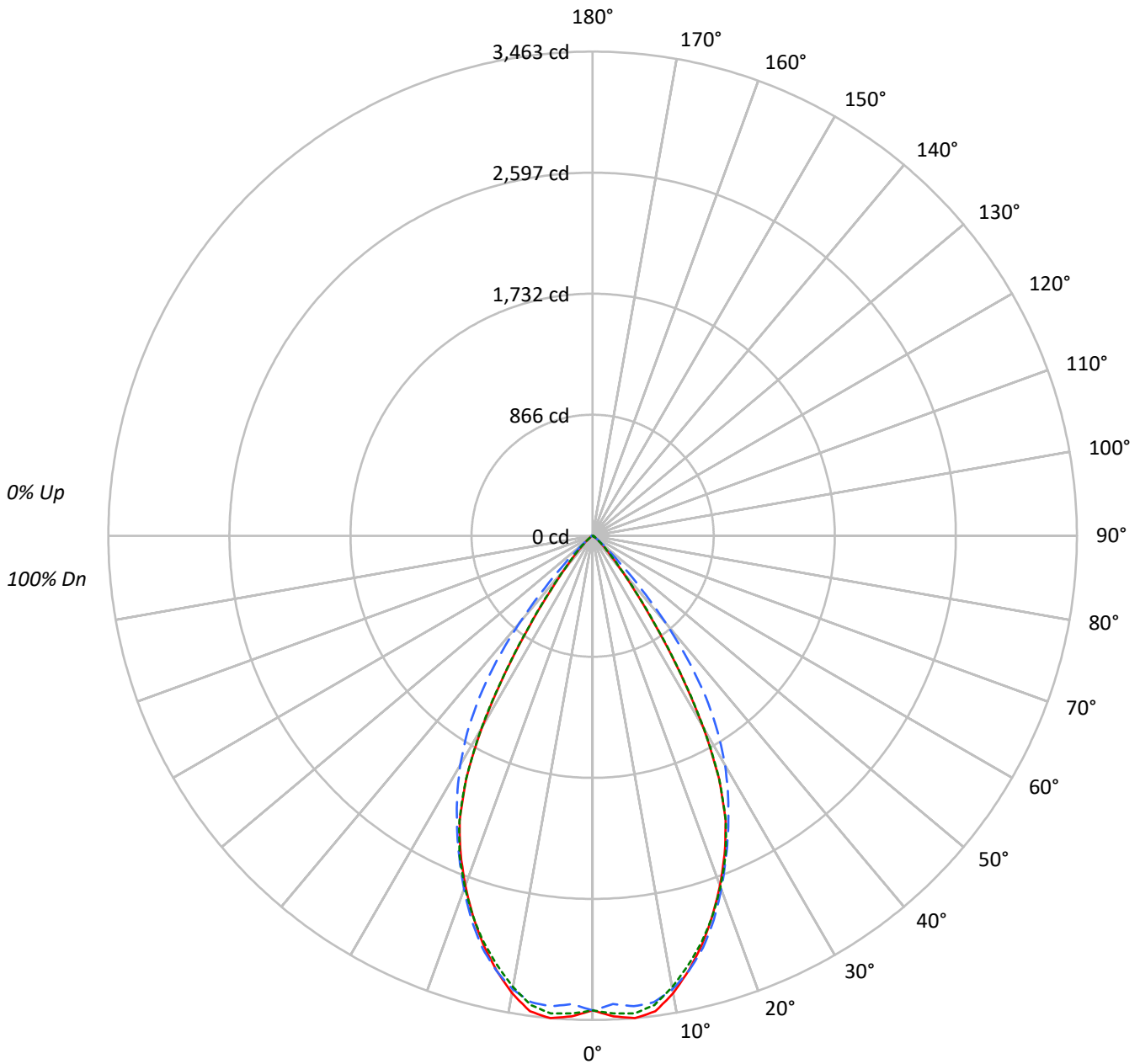
Input Watts (W): 45.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20					20					20					20					20					
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	93	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°	173954	173954	173954
5°	178137	173744	176378
10°	172788	171377	170488
15°	160453	161811	159620
20°	145133	146605	145672
25°	127129	129701	127451
30°	93608	111979	94028
35°	48634	88368	49704
40°	20481	54200	21338
45°	9391	20123	9703
50°	4313	6018	4424
55°	2162	2421	2162
60°	1312	1455	1312
65°	861	1031	861
70°	644	644	644
75°	277	554	277
80°	413	413	413
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	321.3	10.5
10°-20°	844.6	27.5
20°-30°	1032.7	33.7
30°-40°	663.6	21.6
40°-50°	165.6	5.4
50°-60°	27.7	0.9
60°-70°	8.4	0.3
70°-80°	2.5	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°	2198.6	71.7
0°-40°	2862.3	93.3
0°-60°	3055.5	99.6
0°-90°	3067.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3067.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3395	3395	3395	3395	3395	
5°	3463	3389	3378	3381	3429	326
15°	3025	3041	3050	3016	3009	844
25°	2249	2309	2294	2317	2254	1003
35°	778	1026	1413	1044	795	514
45°	130	162	278	171	134	112
55°	24	27	27	27	24	24
65°	7	8	8	8	7	8
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°	3394.9	3394.9	3394.9	3394.9	3394.9	3394.9	3394.9	3394.9	3394.9	3394.9	3394.9
2.5°	3440.5	3355.1	3422.0	3416.3	3359.3	3370.7	3380.7	3379.3	3377.9	3352.2	3412.0
5°	3463.3	3376.4	3444.8	3436.2	3383.5	3394.9	3400.6	3403.5	3396.4	3377.9	3434.8
7.5°	3430.5	3349.4	3414.9	3404.9	3363.6	3373.6	3377.9	3385.0	3375.0	3365.0	3419.1
10°	3320.9	3252.5	3313.8	3306.6	3279.6	3291.0	3293.8	3305.2	3293.8	3293.8	3342.2
12.5°	3181.3	3128.6	3184.2	3178.5	3168.5	3181.3	3177.1	3197.0	3179.9	3185.6	3229.7
15°	3024.7	2990.5	3036.1	3034.7	3036.1	3046.0	3033.2	3047.5	3031.8	3050.3	3088.8
17.5°	2848.1	2832.4	2868.0	2869.5	2880.9	2883.7	2863.8	2882.3	2859.5	2880.9	2913.6
20°	2661.6	2664.4	2692.9	2688.6	2705.7	2697.2	2668.7	2687.2	2664.4	2688.6	2714.2
22.5°	2465.0	2489.2	2504.9	2502.1	2524.8	2513.5	2477.9	2486.4	2463.6	2490.7	2506.3
25°	2248.6	2275.6	2287.0	2287.0	2311.2	2307.0	2275.6	2289.9	2268.5	2294.1	2302.7
27.5°	1953.8	1988.0	1996.5	2013.6	2054.9	2063.5	2050.6	2079.1	2070.6	2097.6	2094.8
30°	1582.1	1616.3	1629.1	1663.3	1730.2	1770.1	1791.5	1847.0	1861.2	1892.6	1876.9
32.5°	1166.3	1194.8	1213.3	1264.6	1352.8	1434.0	1506.6	1589.2	1633.4	1667.6	1639.1
35°	777.5	798.9	818.8	882.9	975.5	1076.6	1182.0	1300.2	1375.6	1412.7	1374.2
37.5°	488.4	502.7	515.5	562.5	636.6	730.5	843.0	978.3	1082.3	1126.4	1078.0
40°	306.2	314.7	321.8	350.3	395.9	452.8	548.3	662.2	769.0	810.3	764.7
42.5°	196.5	200.8	205.1	220.7	244.9	280.5	333.2	404.4	478.5	507.0	477.1
45°	129.6	131.0	132.4	141.0	153.8	170.9	197.9	230.7	266.3	277.7	264.9
47.5°	85.4	85.4	86.9	92.6	99.7	109.7	119.6	128.2	139.6	145.3	138.1
50°	54.1	55.5	57.0	61.2	65.5	69.8	72.6	72.6	75.5	75.5	74.1
52.5°	32.8	32.8	34.2	35.6	41.3	45.6	45.6	42.7	42.7	42.7	41.3
55°	24.2	24.2	24.2	25.6	27.1	27.1	27.1	27.1	27.1	27.1	25.6
57.5°	18.5	18.5	18.5	19.9	19.9	19.9	19.9	18.5	18.5	18.5	18.5
60°	12.8	12.8	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	12.8
62.5°	10.0	10.0	10.0	11.4	11.4	11.4	11.4	11.4	11.4	10.0	10.0
65°	7.1	7.1	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
67.5°	5.7	5.7	5.7	5.7	5.7	5.7	7.1	5.7	5.7	5.7	5.7
70°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
72.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75°	1.4	1.4	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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°	3394.9	3394.9	3394.9	3394.9	3394.9	3394.9	3394.9	3394.9
2.5°	3426.3	3430.5	3367.9	3380.7	3426.3	3380.7	3382.1	3419.1
5°	3439.1	3437.7	3373.6	3389.2	3416.3	3383.5	3385.0	3429.1
7.5°	3410.6	3397.8	3333.7	3352.2	3359.3	3336.6	3336.6	3385.0
10°	3322.3	3301.0	3241.1	3259.7	3246.8	3232.6	3228.3	3276.7
12.5°	3207.0	3182.8	3131.5	3148.6	3117.2	3117.2	3104.4	3148.6
15°	3063.1	3041.8	3006.2	3026.1	2979.1	2989.1	2969.1	3009.0
17.5°	2890.8	2876.6	2856.6	2880.9	2825.3	2842.4	2815.4	2849.5
20°	2692.9	2685.8	2682.9	2707.1	2650.2	2678.6	2647.3	2671.5
22.5°	2487.8	2487.8	2503.5	2536.2	2473.6	2504.9	2467.9	2482.1
25°	2285.6	2287.0	2305.5	2328.3	2267.1	2294.1	2252.9	2254.3
27.5°	2070.6	2057.8	2077.7	2073.4	1996.5	2012.2	1968.0	1959.5
30°	1834.2	1795.7	1781.5	1741.6	1654.7	1651.9	1606.3	1589.2
32.5°	1575.0	1502.4	1458.2	1377.1	1266.0	1240.3	1199.1	1179.1
35°	1287.3	1177.7	1097.9	991.1	881.5	844.5	811.7	794.6
37.5°	971.2	845.9	754.7	652.2	573.9	544.0	516.9	505.5
40°	662.2	555.4	477.1	408.7	360.3	341.8	326.1	319.0
42.5°	408.7	340.3	294.8	253.5	226.4	216.5	209.3	205.1
45°	233.5	202.2	182.3	159.5	146.7	141.0	136.7	133.9
47.5°	129.6	121.0	113.9	104.0	95.4	91.1	89.7	88.3
50°	72.6	74.1	74.1	68.4	64.1	59.8	57.0	55.5
52.5°	42.7	45.6	47.0	42.7	37.0	34.2	34.2	32.8
55°	27.1	27.1	27.1	27.1	25.6	24.2	24.2	24.2
57.5°	18.5	18.5	19.9	19.9	19.9	18.5	18.5	17.1
60°	14.2	14.2	14.2	14.2	14.2	14.2	12.8	12.8
62.5°	11.4	11.4	11.4	11.4	11.4	10.0	10.0	10.0
65°	8.5	8.5	8.5	8.5	8.5	7.1	7.1	7.1
67.5°	5.7	7.1	5.7	5.7	5.7	5.7	5.7	5.7
70°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
72.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75°	2.8	2.8	2.8	2.8	2.8	1.4	1.4	1.4
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	1.4
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)