

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: P136815

Luminaire Tested: **LDSQ6A30D010TE ESQ6A30940 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136815
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 ESQ6A30940 6LSQ1LI
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2856.8 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

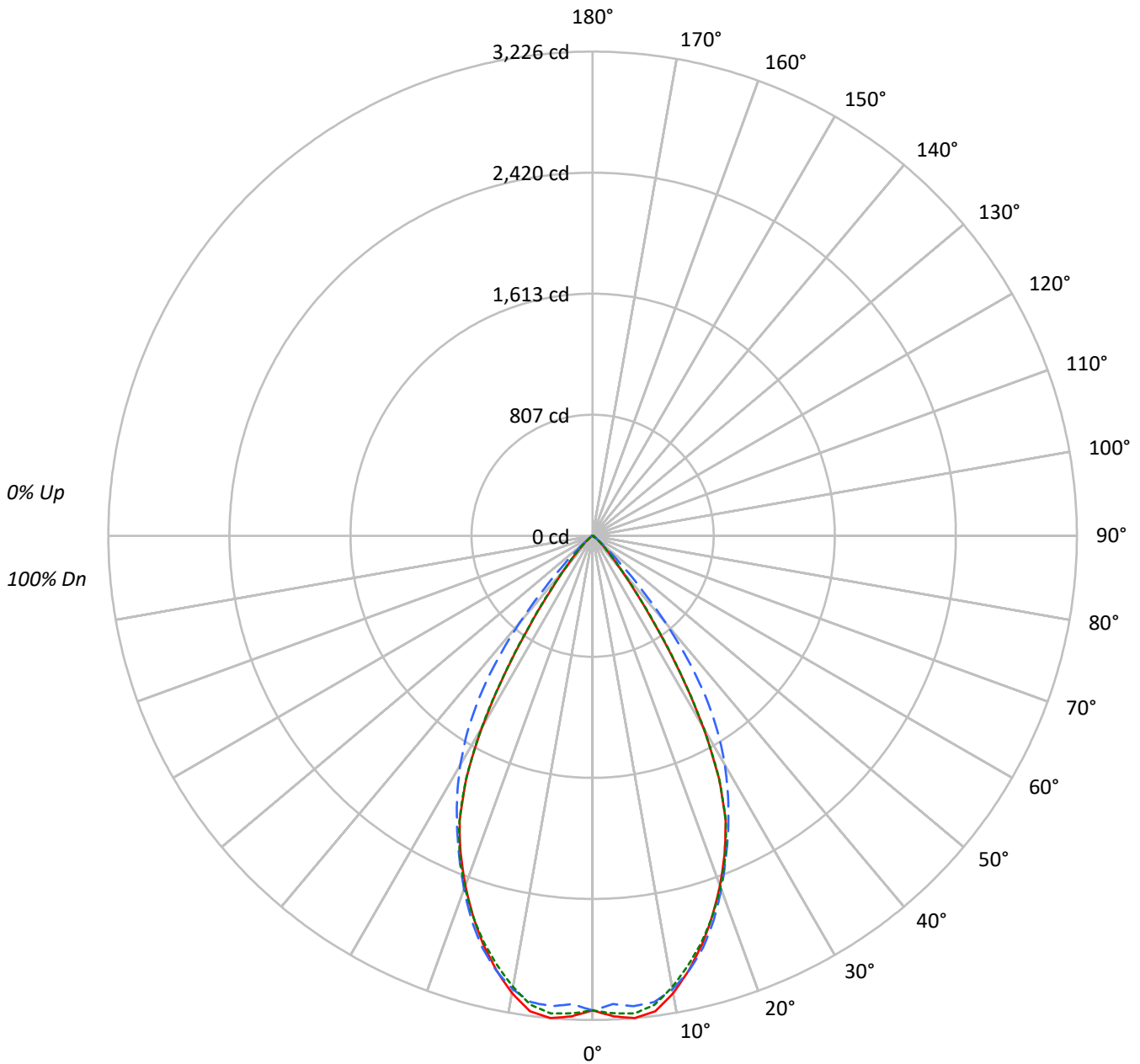
Input Watts (W): 45.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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	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°	162036	162036	162036
5°	165926	161832	164285
10°	160940	159629	158807
15°	149450	150724	148676
20°	135187	136561	135688
25°	118411	120814	118711
30°	87194	104299	87584
35°	45307	82306	46301
40°	19077	50488	19873
45°	8746	18746	9036
50°	4018	5604	4129
55°	2019	2251	2019
60°	1230	1353	1230
65°	812	958	812
70°	599	599	599
75°	277	515	277
80°	413	413	413
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.3	10.5
10°-20°	786.7	27.5
20°-30°	961.9	33.7
30°-40°	618.1	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°	2047.9	71.7
0°-40°	2666.1	93.3
0°-60°	2846.1	99.6
0°-90°	2856.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2856.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3162	3162	3162	3162	3162	
5°	3226	3157	3146	3150	3194	304
15°	2817	2833	2841	2809	2803	786
25°	2094	2151	2137	2158	2100	934
35°	724	956	1316	973	740	479
45°	121	151	259	159	125	104
55°	23	25	25	25	23	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°	3162.3	3162.3	3162.3	3162.3	3162.3	3162.3	3162.3	3162.3	3162.3	3162.3	3162.3
2.5°	3204.7	3125.1	3187.5	3182.2	3129.0	3139.7	3148.9	3147.7	3146.3	3122.5	3178.2
5°	3225.9	3145.0	3208.6	3200.7	3151.6	3162.3	3167.6	3170.2	3163.5	3146.3	3199.3
7.5°	3195.4	3119.8	3180.8	3171.5	3133.1	3142.4	3146.3	3153.0	3143.6	3134.4	3184.8
10°	3093.2	3029.6	3086.7	3080.0	3054.8	3065.4	3068.0	3078.6	3068.0	3068.0	3113.1
12.5°	2963.2	2914.2	2965.9	2960.6	2951.4	2963.2	2959.3	2977.8	2962.0	2967.2	3008.3
15°	2817.3	2785.6	2828.0	2826.6	2828.0	2837.2	2825.3	2838.6	2824.0	2841.3	2877.0
17.5°	2652.9	2638.3	2671.4	2672.8	2683.4	2686.0	2667.5	2684.7	2663.5	2683.4	2713.9
20°	2479.2	2481.8	2508.3	2504.4	2520.2	2512.3	2485.7	2503.0	2481.8	2504.4	2528.2
22.5°	2296.1	2318.7	2333.2	2330.5	2351.8	2341.2	2308.0	2316.0	2294.7	2319.9	2334.5
25°	2094.4	2119.6	2130.3	2130.3	2152.9	2148.8	2119.6	2133.0	2113.0	2136.9	2144.8
27.5°	1819.9	1851.7	1859.7	1875.6	1914.0	1922.0	1910.1	1936.6	1928.6	1953.8	1951.2
30°	1473.7	1505.5	1517.4	1549.3	1611.6	1648.8	1668.7	1720.4	1733.7	1762.8	1748.2
32.5°	1086.4	1112.9	1130.1	1177.9	1260.1	1335.7	1403.4	1480.3	1521.4	1553.3	1526.7
35°	724.3	744.1	762.7	822.4	908.6	1002.7	1101.0	1211.0	1281.3	1315.8	1280.0
37.5°	454.9	468.3	480.1	524.0	592.9	680.5	785.3	911.3	1008.1	1049.2	1004.1
40°	285.2	293.2	299.7	326.3	368.8	421.8	510.6	616.8	716.2	754.8	712.3
42.5°	183.1	187.1	191.0	205.6	228.2	261.3	310.4	376.7	445.7	472.2	444.4
45°	120.7	122.1	123.3	131.3	143.2	159.1	184.3	214.9	248.1	258.7	246.7
47.5°	79.6	79.6	80.9	86.2	92.9	102.2	111.4	119.4	130.0	135.3	128.6
50°	50.4	51.8	53.0	57.1	61.0	65.0	67.7	67.7	70.3	70.3	68.9
52.5°	30.5	30.5	31.9	33.1	38.4	42.5	42.5	39.8	39.8	39.8	38.4
55°	22.6	22.6	22.6	23.9	25.2	25.2	25.2	25.2	25.2	25.2	23.9
57.5°	17.3	17.3	17.3	18.5	18.5	18.5	18.5	17.3	17.3	17.3	17.3
60°	12.0	12.0	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	12.0
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°	6.7	6.7	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
67.5°	5.3	5.3	5.3	5.3	5.3	5.3	6.7	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°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
75°	1.4	1.4	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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°	3162.3	3162.3	3162.3	3162.3	3162.3	3162.3	3162.3	3162.3
2.5°	3191.4	3195.4	3137.1	3148.9	3191.4	3148.9	3150.3	3184.8
5°	3203.4	3202.1	3142.4	3157.0	3182.2	3151.6	3153.0	3194.0
7.5°	3176.9	3164.9	3105.2	3122.5	3129.0	3107.9	3107.9	3153.0
10°	3094.6	3074.7	3019.0	3036.2	3024.3	3011.0	3007.1	3052.2
12.5°	2987.2	2964.6	2916.9	2932.7	2903.6	2903.6	2891.7	2932.7
15°	2853.2	2833.3	2800.1	2818.7	2774.9	2784.2	2765.7	2802.7
17.5°	2692.7	2679.4	2660.8	2683.4	2631.6	2647.6	2622.4	2654.2
20°	2508.3	2501.7	2499.0	2521.5	2468.5	2495.0	2465.8	2488.4
22.5°	2317.3	2317.3	2331.9	2362.4	2304.0	2333.2	2298.8	2312.0
25°	2128.9	2130.3	2147.5	2168.7	2111.7	2136.9	2098.4	2099.7
27.5°	1928.6	1916.8	1935.3	1931.3	1859.7	1874.3	1833.1	1825.2
30°	1708.5	1672.6	1659.4	1622.2	1541.3	1538.7	1496.2	1480.3
32.5°	1467.0	1399.4	1358.3	1282.7	1179.2	1155.3	1116.9	1098.3
35°	1199.1	1097.0	1022.7	923.2	821.1	786.5	756.1	740.2
37.5°	904.6	787.9	703.0	607.5	534.6	506.7	481.5	470.9
40°	616.8	517.3	444.4	380.7	335.6	318.4	303.8	297.1
42.5°	380.7	317.0	274.5	236.1	210.9	201.6	195.0	191.0
45°	217.6	188.4	169.8	148.5	136.6	131.3	127.4	124.7
47.5°	120.7	112.8	106.1	96.9	88.8	84.9	83.5	82.3
50°	67.7	68.9	68.9	63.6	59.7	55.7	53.0	51.8
52.5°	39.8	42.5	43.7	39.8	34.5	31.9	31.9	30.5
55°	25.2	25.2	25.2	25.2	23.9	22.6	22.6	22.6
57.5°	17.3	17.3	18.5	18.5	18.5	17.3	17.3	15.9
60°	13.2	13.2	13.2	13.2	13.2	13.2	12.0	12.0
62.5°	10.6	10.6	10.6	10.6	10.6	9.3	9.3	9.3
65°	7.9	7.9	7.9	7.9	7.9	6.7	6.7	6.7
67.5°	5.3	6.7	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°	2.6	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	1.4	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)