

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: P136809

Luminaire Tested: **LDSQ6A30D010TE ESQ6A30830 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136809
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 ESQ6A30830 6LSQ1LI
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2990.0 lumens
Efficiency: N/A
Efficacy: 65.9 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

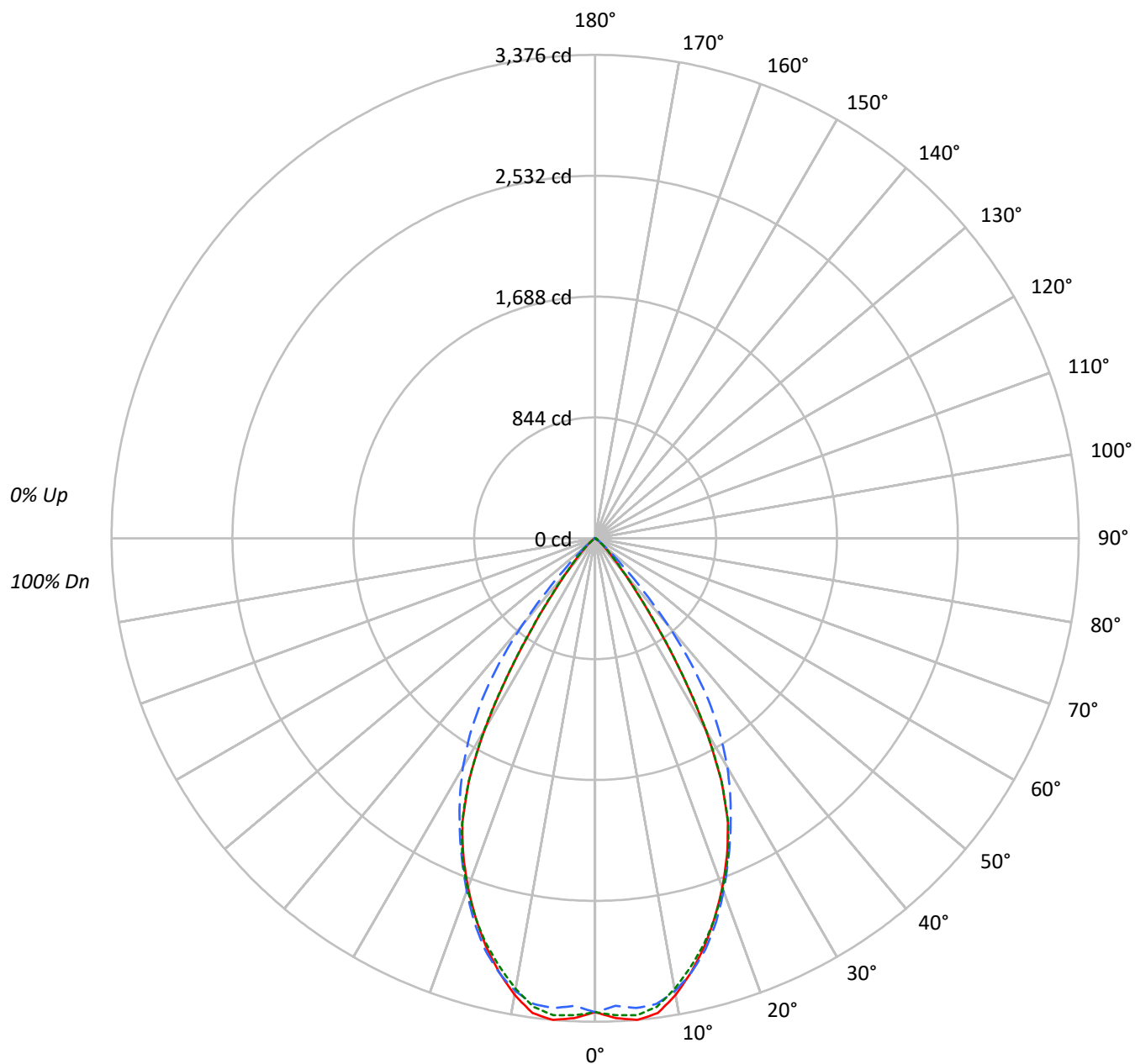
Input Watts (W): 45.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10		50	30	10			50	30	10			50
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	114	111	108	106	111	109	106	104		105	103	101			101	99	98			97
2	108	103	99	96	106	101	98	95		98	95	93			95	93	91			92
3	103	96	91	87	101	95	90	87		92	88	85			90	87	84			88
4	97	90	84	80	96	89	84	80		87	82	79			85	81	78			83
5	92	84	78	74	91	83	78	74		81	77	73			80	76	72			78
6	88	79	73	69	86	78	73	69		77	72	68			75	71	68			74
7	84	74	68	64	82	74	68	64		72	67	64			71	67	63			70
8	79	70	64	60	78	69	64	60		68	63	60			67	63	59			66
9	76	66	60	56	75	66	60	56		65	59	56			64	59	56			63
10	72	62	57	53	71	62	56	53		61	56	53			60	56	52			60

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	169589	169589	169589
5°	173662	169377	171949
10°	168448	167075	166211
15°	156421	157747	155615
20°	141485	142924	142019
25°	123935	126451	124251
30°	91259	109168	91667
35°	47415	86147	48459
40°	19966	52836	20802
45°	9152	19616	9457
50°	4209	5867	4313
55°	2108	2358	2108
60°	1281	1424	1281
65°	837	1006	837
70°	629	629	629
75°	277	554	277
80°	413	413	413
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.2	10.5
10°-20°	823.4	27.5
20°-30°	1006.8	33.7
30°-40°	647.0	21.6
40°-50°	161.4	5.4
50°-60°	27.0	0.9
60°-70°	8.2	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°	2143.4	71.7
0°-40°	2790.4	93.3
0°-60°	2978.8	99.6
0°-90°	2990.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2990.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3310	3310	3310	3310	3310	
5°	3376	3304	3293	3297	3343	318
15°	2949	2965	2974	2940	2934	823
25°	2192	2251	2237	2259	2198	978
35°	758	1000	1377	1018	775	501
45°	126	158	271	167	130	109
55°	24	26	26	26	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	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3309.7	3309.7	3309.7	3309.7	3309.7	3309.7	3309.7	3309.7	3309.7	3309.7	3309.7
2.5°	3354.1	3270.8	3336.1	3330.5	3275.0	3286.1	3295.8	3294.4	3293.0	3268.1	3326.4
5°	3376.3	3291.7	3358.3	3350.0	3298.6	3309.7	3315.3	3318.0	3311.1	3293.0	3348.6
7.5°	3344.4	3265.3	3329.1	3319.4	3279.2	3288.9	3293.0	3300.0	3290.3	3280.6	3333.3
10°	3237.5	3170.9	3230.6	3223.6	3197.3	3208.4	3211.1	3222.2	3211.1	3211.1	3258.3
12.5°	3101.5	3050.1	3104.2	3098.7	3089.0	3101.5	3097.3	3116.7	3100.1	3105.6	3148.7
15°	2948.7	2915.4	2959.9	2958.5	2959.9	2969.6	2957.1	2971.0	2955.7	2973.7	3011.2
17.5°	2776.6	2761.3	2796.0	2797.4	2808.5	2811.3	2791.9	2809.9	2787.7	2808.5	2840.5
20°	2594.7	2597.5	2625.3	2621.1	2637.8	2629.4	2601.7	2619.7	2597.5	2621.1	2646.1
22.5°	2403.1	2426.7	2442.0	2439.2	2461.5	2450.3	2415.6	2424.0	2401.8	2428.1	2443.4
25°	2192.1	2218.5	2229.6	2229.6	2253.2	2249.0	2218.5	2232.4	2211.6	2236.6	2244.9
27.5°	1904.7	1938.1	1946.4	1963.1	2003.3	2011.6	1999.2	2026.9	2018.6	2045.0	2042.2
30°	1542.4	1575.7	1588.2	1621.5	1686.8	1725.7	1746.5	1800.6	1814.5	1845.1	1829.8
32.5°	1137.0	1164.8	1182.8	1232.8	1318.9	1398.0	1468.8	1549.3	1592.4	1625.7	1597.9
35°	758.0	778.8	798.3	860.7	951.0	1049.6	1152.3	1267.5	1341.1	1377.2	1339.7
37.5°	476.2	490.1	502.6	548.4	620.6	712.2	821.9	953.8	1055.1	1098.1	1050.9
40°	298.5	306.8	313.8	341.5	385.9	441.5	534.5	645.6	749.7	789.9	745.5
42.5°	191.6	195.8	199.9	215.2	238.8	273.5	324.9	394.3	466.5	494.2	465.1
45°	126.3	127.7	129.1	137.4	149.9	166.6	193.0	224.9	259.6	270.7	258.2
47.5°	83.3	83.3	84.7	90.2	97.2	106.9	116.6	124.9	136.1	141.6	134.7
50°	52.8	54.1	55.5	59.7	63.9	68.0	70.8	70.8	73.6	73.6	72.2
52.5°	31.9	31.9	33.3	34.7	40.3	44.4	44.4	41.6	41.6	41.6	40.3
55°	23.6	23.6	23.6	25.0	26.4	26.4	26.4	26.4	26.4	26.4	25.0
57.5°	18.0	18.0	18.0	19.4	19.4	19.4	19.4	18.0	18.0	18.0	18.0
60°	12.5	12.5	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	12.5
62.5°	9.7	9.7	9.7	11.1	11.1	11.1	11.1	11.1	11.1	9.7	9.7
65°	6.9	6.9	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
67.5°	5.6	5.6	5.6	5.6	5.6	5.6	6.9	5.6	5.6	5.6	5.6
70°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
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°	3309.7	3309.7	3309.7	3309.7	3309.7	3309.7	3309.7	3309.7
2.5°	3340.2	3344.4	3283.3	3295.8	3340.2	3295.8	3297.2	3333.3
5°	3352.7	3351.4	3288.9	3304.2	3330.5	3298.6	3300.0	3343.0
7.5°	3325.0	3312.5	3250.0	3268.1	3275.0	3252.8	3252.8	3300.0
10°	3238.9	3218.1	3159.8	3177.8	3165.3	3151.4	3147.3	3194.5
12.5°	3126.5	3102.8	3052.9	3069.5	3039.0	3039.0	3026.5	3069.5
15°	2986.2	2965.4	2930.7	2950.1	2904.3	2914.0	2894.6	2933.5
17.5°	2818.2	2804.4	2784.9	2808.5	2754.4	2771.0	2744.7	2778.0
20°	2625.3	2618.3	2615.6	2639.2	2583.6	2611.4	2580.8	2604.5
22.5°	2425.4	2425.4	2440.6	2472.6	2411.5	2442.0	2405.9	2419.8
25°	2228.2	2229.6	2247.7	2269.9	2210.2	2236.6	2196.3	2197.7
27.5°	2018.6	2006.1	2025.5	2021.4	1946.4	1961.7	1918.6	1910.3
30°	1788.1	1750.6	1736.8	1697.9	1613.2	1610.4	1566.0	1549.3
32.5°	1535.5	1464.7	1421.6	1342.5	1234.2	1209.2	1168.9	1149.5
35°	1255.0	1148.1	1070.4	966.3	859.4	823.3	791.3	774.7
37.5°	946.8	824.7	735.8	635.8	559.5	530.3	504.0	492.8
40°	645.6	541.4	465.1	398.4	351.2	333.2	317.9	311.0
42.5°	398.4	331.8	287.4	247.1	220.7	211.0	204.1	199.9
45°	227.7	197.1	177.7	155.5	143.0	137.4	133.3	130.5
47.5°	126.3	118.0	111.1	101.3	93.0	88.9	87.5	86.1
50°	70.8	72.2	72.2	66.6	62.5	58.3	55.5	54.1
52.5°	41.6	44.4	45.8	41.6	36.1	33.3	33.3	31.9
55°	26.4	26.4	26.4	26.4	25.0	23.6	23.6	23.6
57.5°	18.0	18.0	19.4	19.4	19.4	18.0	18.0	16.7
60°	13.9	13.9	13.9	13.9	13.9	13.9	12.5	12.5
62.5°	11.1	11.1	11.1	11.1	11.1	9.7	9.7	9.7
65°	8.3	8.3	8.3	8.3	8.3	6.9	6.9	6.9
67.5°	5.6	6.9	5.6	5.6	5.6	5.6	5.6	5.6
70°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
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)