

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: P136811

Luminaire Tested: **LDSQ6A30D010TE ESQ6A30840 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136811
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 ESQ6A30840 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: 3129.0 lumens
Efficiency: N/A
Efficacy: 68.9 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

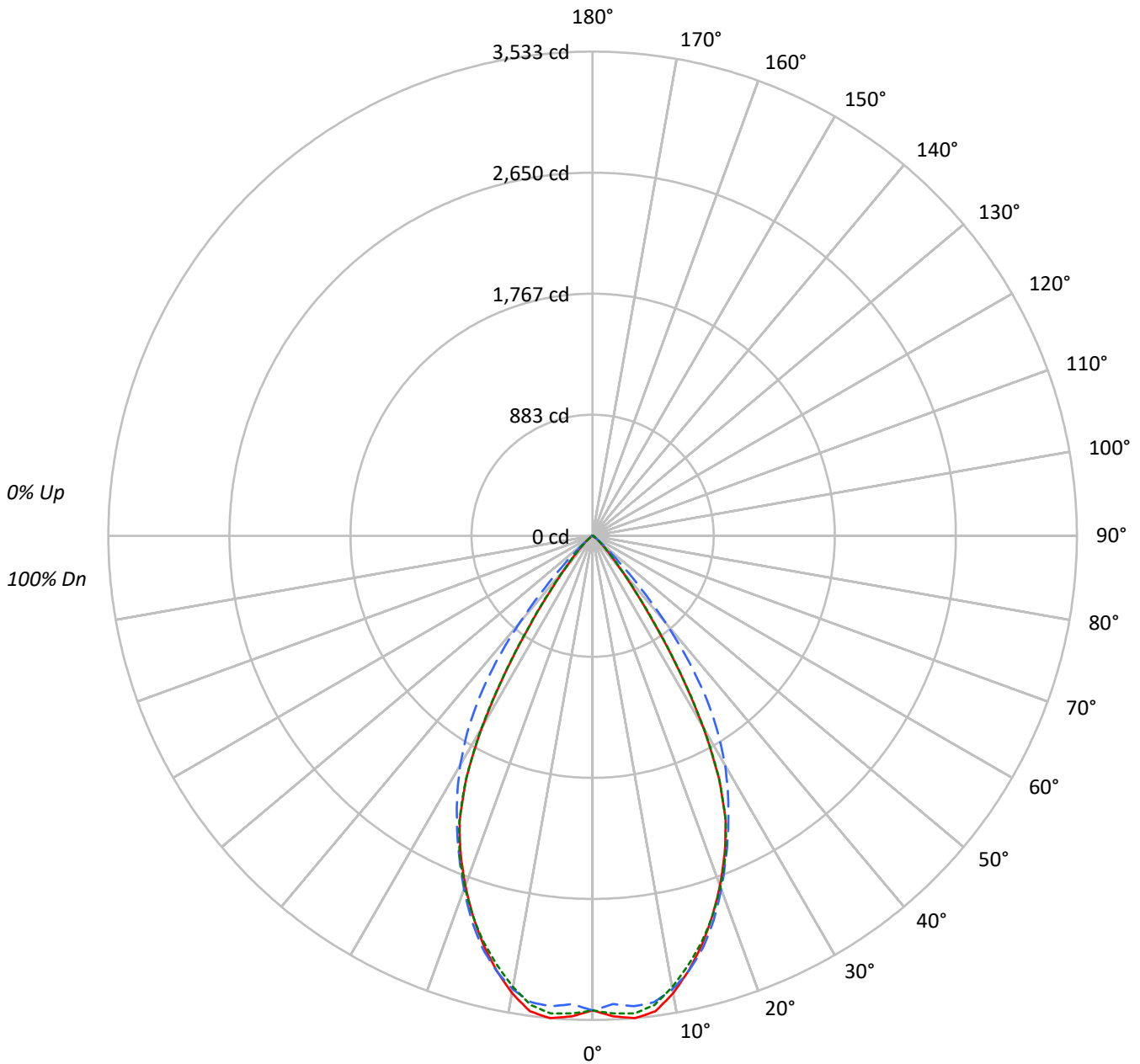
Input Watts (W): 45.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					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°	177474	177474	177474
5°	181737	177252	179942
10°	176279	174843	173937
15°	163694	165084	162845
20°	148066	149571	148617
25°	129696	132325	130024
30°	95501	114239	95933
35°	49623	90150	50711
40°	20896	55297	21766
45°	9580	20529	9899
50°	4400	6138	4520
55°	2207	2466	2207
60°	1342	1486	1342
65°	885	1055	885
70°	659	659	659
75°	297	574	297
80°	443	443	443
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.8	10.5
10°-20°	861.7	27.5
20°-30°	1053.6	33.7
30°-40°	677.1	21.6
40°-50°	168.9	5.4
50°-60°	28.3	0.9
60°-70°	8.5	0.3
70°-80°	2.6	0.1
80°-90°	0.6	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°	2243.1	71.7
0°-40°	2920.1	93.3
0°-60°	3117.3	99.6
0°-90°	3129.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3129.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3464	3464	3464	3464	3464	
5°	3533	3458	3446	3450	3498	333
15°	3086	3103	3112	3077	3070	861
25°	2294	2356	2340	2364	2300	1023
35°	793	1047	1441	1066	811	525
45°	132	166	283	174	137	114
55°	25	28	28	28	25	25
65°	7	9	9	9	7	8
75°	2	3	3	3	2	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°	3463.6	3463.6	3463.6	3463.6	3463.6	3463.6	3463.6	3463.6	3463.6	3463.6	3463.6
2.5°	3510.1	3422.9	3491.2	3485.4	3427.2	3438.9	3449.0	3447.6	3446.1	3420.0	3481.0
5°	3533.3	3444.7	3514.4	3505.7	3451.9	3463.6	3469.4	3472.3	3465.0	3446.1	3504.2
7.5°	3499.9	3417.1	3483.9	3473.7	3431.6	3441.8	3446.1	3453.4	3443.2	3433.1	3488.3
10°	3388.0	3318.3	3380.8	3373.5	3345.9	3357.5	3360.4	3372.0	3360.4	3360.4	3409.8
12.5°	3245.6	3191.9	3248.5	3242.7	3232.6	3245.6	3241.3	3261.6	3244.2	3250.0	3295.0
15°	3085.8	3051.0	3097.5	3096.0	3097.5	3107.6	3094.5	3109.1	3093.1	3112.0	3151.2
17.5°	2905.7	2889.7	2926.0	2927.5	2939.1	2942.0	2921.7	2940.5	2917.3	2939.1	2972.5
20°	2715.4	2718.3	2747.3	2743.0	2760.4	2751.7	2722.6	2741.5	2718.3	2743.0	2769.1
22.5°	2514.9	2539.6	2555.5	2552.6	2575.9	2564.3	2527.9	2536.7	2513.4	2541.0	2557.0
25°	2294.0	2321.6	2333.3	2333.3	2358.0	2353.6	2321.6	2336.2	2314.4	2340.5	2349.2
27.5°	1993.3	2028.2	2036.9	2054.3	2096.4	2105.2	2092.1	2121.1	2112.4	2140.0	2137.1
30°	1614.1	1649.0	1662.0	1696.9	1765.2	1805.9	1827.7	1884.3	1898.9	1930.8	1914.8
32.5°	1189.9	1218.9	1237.8	1290.1	1380.2	1463.0	1537.1	1621.4	1666.4	1701.3	1672.2
35°	793.3	815.0	835.4	900.8	995.2	1098.3	1205.9	1326.4	1403.4	1441.2	1402.0
37.5°	498.3	512.9	525.9	573.9	649.4	745.3	860.1	998.1	1104.2	1149.2	1099.8
40°	312.4	321.1	328.3	357.4	403.9	462.0	559.3	675.6	784.5	826.7	780.2
42.5°	200.5	204.9	209.2	225.2	249.9	286.2	340.0	412.6	488.2	517.2	486.7
45°	132.2	133.7	135.1	143.8	156.9	174.3	201.9	235.4	271.7	283.3	270.2
47.5°	87.2	87.2	88.6	94.4	101.7	111.9	122.0	130.8	142.4	148.2	140.9
50°	55.2	56.7	58.1	62.5	66.8	71.2	74.1	74.1	77.0	77.0	75.5
52.5°	33.4	33.4	34.9	36.3	42.1	46.5	46.5	43.6	43.6	43.6	42.1
55°	24.7	24.7	24.7	26.2	27.6	27.6	27.6	27.6	27.6	27.6	26.2
57.5°	18.9	18.9	18.9	20.3	20.3	20.3	20.3	18.9	18.9	18.9	18.9
60°	13.1	13.1	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	13.1
62.5°	10.2	10.2	10.2	11.6	11.6	11.6	11.6	11.6	11.6	10.2	10.2
65°	7.3	7.3	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
67.5°	5.8	5.8	5.8	5.8	5.8	5.8	7.3	5.8	5.8	5.8	5.8
70°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
72.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
75°	1.5	1.5	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
82.5°	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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°	3463.6	3463.6	3463.6	3463.6	3463.6	3463.6	3463.6	3463.6
2.5°	3495.5	3499.9	3436.0	3449.0	3495.5	3449.0	3450.5	3488.3
5°	3508.6	3507.2	3441.8	3457.8	3485.4	3451.9	3453.4	3498.4
7.5°	3479.6	3466.5	3401.1	3420.0	3427.2	3404.0	3404.0	3453.4
10°	3389.5	3367.7	3306.7	3325.5	3312.5	3297.9	3293.6	3343.0
12.5°	3271.8	3247.1	3194.8	3212.2	3180.3	3180.3	3167.2	3212.2
15°	3125.1	3103.3	3066.9	3087.3	3039.3	3049.5	3029.2	3069.8
17.5°	2949.3	2934.7	2914.4	2939.1	2882.4	2899.9	2872.3	2907.1
20°	2747.3	2740.1	2737.1	2761.8	2703.7	2732.8	2700.8	2725.5
22.5°	2538.1	2538.1	2554.1	2587.5	2523.6	2555.5	2517.8	2532.3
25°	2331.8	2333.3	2352.1	2375.4	2312.9	2340.5	2298.4	2299.8
27.5°	2112.4	2099.4	2119.7	2115.3	2036.9	2052.9	2007.8	1999.1
30°	1871.3	1832.0	1817.5	1776.8	1688.2	1685.3	1638.8	1621.4
32.5°	1606.8	1532.7	1487.7	1404.9	1291.6	1265.4	1223.3	1203.0
35°	1313.4	1201.5	1120.1	1011.2	899.3	861.5	828.1	810.7
37.5°	990.8	863.0	770.0	665.4	585.5	555.0	527.4	515.8
40°	675.6	566.6	486.7	417.0	367.6	348.7	332.7	325.4
42.5°	417.0	347.2	300.7	258.6	231.0	220.8	213.6	209.2
45°	238.3	206.3	186.0	162.7	149.6	143.8	139.5	136.6
47.5°	132.2	123.5	116.2	106.1	97.3	93.0	91.5	90.1
50°	74.1	75.5	75.5	69.7	65.4	61.0	58.1	56.7
52.5°	43.6	46.5	47.9	43.6	37.8	34.9	34.9	33.4
55°	27.6	27.6	27.6	27.6	26.2	24.7	24.7	24.7
57.5°	18.9	18.9	20.3	20.3	20.3	18.9	18.9	17.4
60°	14.5	14.5	14.5	14.5	14.5	14.5	13.1	13.1
62.5°	11.6	11.6	11.6	11.6	11.6	10.2	10.2	10.2
65°	8.7	8.7	8.7	8.7	8.7	7.3	7.3	7.3
67.5°	5.8	7.3	5.8	5.8	5.8	5.8	5.8	5.8
70°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
72.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
75°	2.9	2.9	2.9	2.9	2.9	1.5	1.5	1.5
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
82.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5
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)