

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: P136785

Luminaire Tested: **LDSQ6A20D010TE ESQ6A20830 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136785
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: LDSQ6A20D010TE ESQ6A20830 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: 2474.9 lumens
Efficiency: N/A
Efficacy: 75.5 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

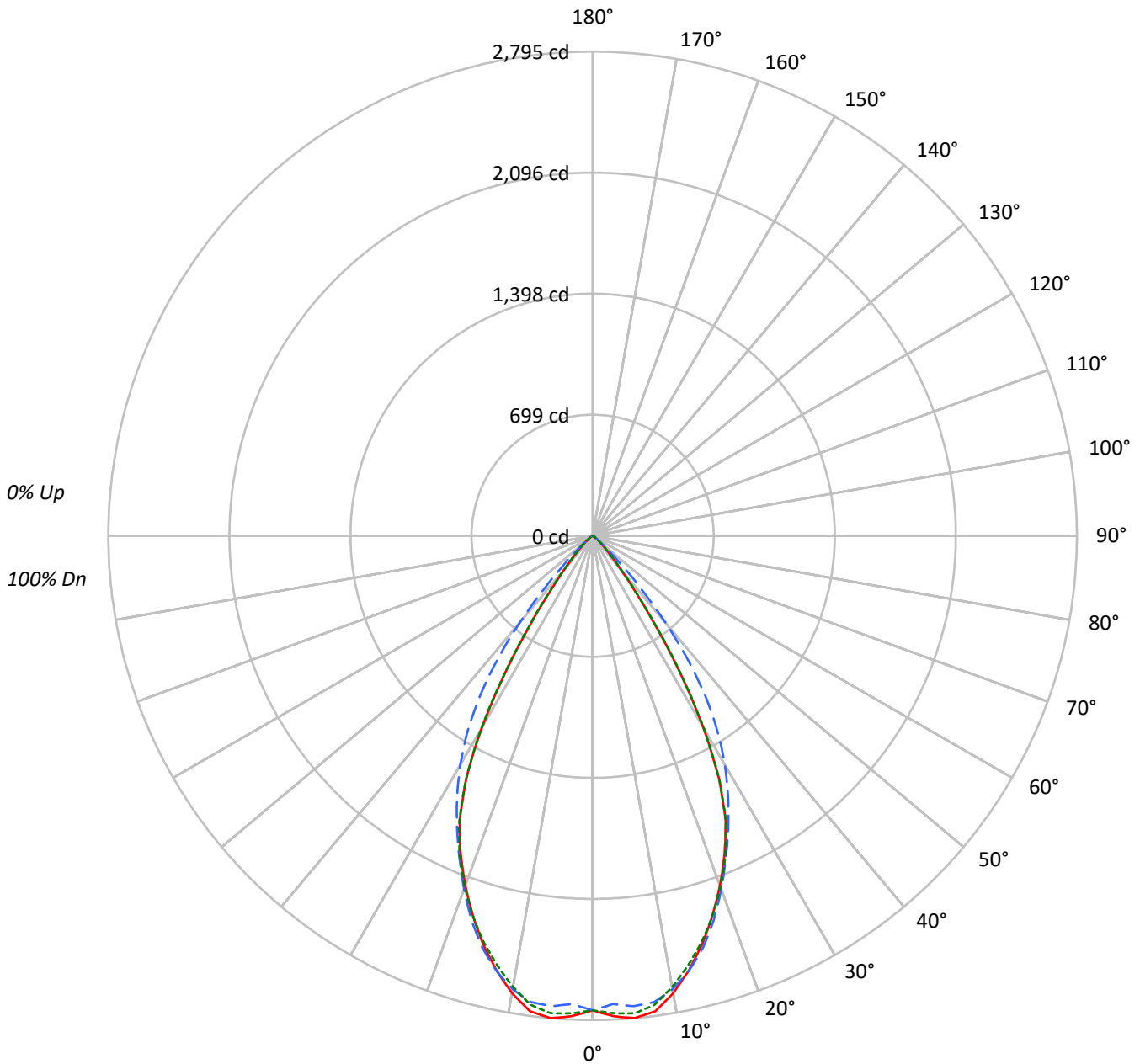
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	140377	140377	140377
5°	143752	140203	142333
10°	139436	138297	137584
15°	129483	130576	128810
20°	117116	118305	117558
25°	102592	104667	102846
30°	75538	90365	75881
35°	39252	71310	40109
40°	16528	43739	17217
45°	7580	16239	7826
50°	3484	4855	3571
55°	1742	1947	1742
60°	1056	1179	1056
65°	691	837	691
70°	509	509	509
75°	218	455	218
80°	325	325	325
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.3	10.5
10°-20°	681.6	27.5
20°-30°	833.4	33.7
30°-40°	535.5	21.6
40°-50°	133.6	5.4
50°-60°	22.4	0.9
60°-70°	6.8	0.3
70°-80°	2.0	0.1
80°-90°	0.4	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°	1774.2	71.7
0°-40°	2309.8	93.3
0°-60°	2465.8	99.6
0°-90°	2474.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2474.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2740	2740	2740	2740	2740	
5°	2795	2735	2726	2729	2767	263
15°	2441	2454	2462	2434	2428	681
25°	1815	1863	1851	1870	1819	809
35°	628	828	1140	843	641	415
45°	105	131	224	138	108	90
55°	20	22	22	22	20	19
65°	6	7	7	7	6	6
75°	1	2	2	2	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°	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6
2.5°	2776.4	2707.5	2761.5	2756.9	2710.9	2720.1	2728.1	2727.0	2725.8	2705.2	2753.4
5°	2794.8	2724.7	2779.9	2773.0	2730.4	2739.6	2744.2	2746.5	2740.8	2725.8	2771.8
7.5°	2768.4	2702.9	2755.7	2747.7	2714.4	2722.4	2725.8	2731.6	2723.6	2715.5	2759.2
10°	2679.9	2624.7	2674.1	2668.4	2646.6	2655.8	2658.0	2667.2	2658.0	2658.0	2697.1
12.5°	2567.3	2524.7	2569.6	2565.0	2556.9	2567.3	2563.8	2579.9	2566.1	2570.7	2606.3
15°	2440.9	2413.3	2450.0	2448.9	2450.0	2458.1	2447.7	2459.2	2446.6	2461.5	2492.6
17.5°	2298.4	2285.7	2314.4	2315.6	2324.8	2327.1	2311.0	2325.9	2307.5	2324.8	2351.2
20°	2147.8	2150.1	2173.1	2169.6	2183.4	2176.5	2153.6	2168.5	2150.1	2169.6	2190.3
22.5°	1989.2	2008.8	2021.4	2019.1	2037.5	2028.3	1999.6	2006.5	1988.1	2009.9	2022.6
25°	1814.6	1836.4	1845.6	1845.6	1865.1	1861.7	1836.4	1847.9	1830.6	1851.3	1858.2
27.5°	1576.7	1604.3	1611.1	1624.9	1658.3	1665.2	1654.8	1677.8	1670.9	1692.7	1690.4
30°	1276.7	1304.3	1314.7	1342.2	1396.3	1428.4	1445.7	1490.5	1502.0	1527.3	1514.6
32.5°	941.2	964.2	979.1	1020.5	1091.7	1157.2	1215.8	1282.5	1318.1	1345.7	1322.7
35°	627.5	644.7	660.8	712.5	787.2	868.8	953.8	1049.2	1110.1	1140.0	1109.0
37.5°	394.2	405.7	416.0	453.9	513.7	589.5	680.3	789.5	873.4	909.0	869.9
40°	247.1	254.0	259.7	282.7	319.5	365.4	442.4	534.4	620.6	653.9	617.1
42.5°	158.6	162.0	165.5	178.1	197.7	226.4	268.9	326.4	386.1	409.1	385.0
45°	104.6	105.7	106.9	113.8	124.1	137.9	159.7	186.2	214.9	224.1	213.7
47.5°	69.0	69.0	70.1	74.7	80.4	88.5	96.5	103.4	112.6	117.2	111.5
50°	43.7	44.8	46.0	49.4	52.9	56.3	58.6	58.6	60.9	60.9	59.8
52.5°	26.4	26.4	27.6	28.7	33.3	36.8	36.8	34.5	34.5	34.5	33.3
55°	19.5	19.5	19.5	20.7	21.8	21.8	21.8	21.8	21.8	21.8	20.7
57.5°	14.9	14.9	14.9	16.1	16.1	16.1	16.1	14.9	14.9	14.9	14.9
60°	10.3	10.3	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	10.3
62.5°	8.0	8.0	8.0	9.2	9.2	9.2	9.2	9.2	9.2	8.0	8.0
65°	5.7	5.7	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
67.5°	4.6	4.6	4.6	4.6	4.6	4.6	5.7	4.6	4.6	4.6	4.6
70°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
72.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
75°	1.1	1.1	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
77.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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°	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6
2.5°	2764.9	2768.4	2717.8	2728.1	2764.9	2728.1	2729.3	2759.2
5°	2775.3	2774.1	2722.4	2735.0	2756.9	2730.4	2731.6	2767.2
7.5°	2752.3	2741.9	2690.2	2705.2	2710.9	2692.5	2692.5	2731.6
10°	2681.0	2663.8	2615.5	2630.5	2620.1	2608.6	2605.2	2644.3
12.5°	2587.9	2568.4	2527.0	2540.8	2515.6	2515.6	2505.2	2540.8
15°	2471.9	2454.6	2425.9	2442.0	2404.1	2412.1	2396.0	2428.2
17.5°	2332.8	2321.3	2305.3	2324.8	2280.0	2293.8	2271.9	2299.5
20°	2173.1	2167.3	2165.1	2184.6	2138.6	2161.6	2136.3	2155.9
22.5°	2007.6	2007.6	2020.3	2046.7	1996.1	2021.4	1991.5	2003.0
25°	1844.4	1845.6	1860.5	1878.9	1829.5	1851.3	1818.0	1819.1
27.5°	1670.9	1660.6	1676.7	1673.2	1611.1	1623.8	1588.2	1581.3
30°	1480.1	1449.1	1437.6	1405.4	1335.3	1333.0	1296.3	1282.5
32.5°	1271.0	1212.4	1176.8	1111.3	1021.6	1000.9	967.6	951.5
35°	1038.9	950.4	886.0	799.8	711.3	681.5	655.0	641.2
37.5°	783.7	682.6	609.1	526.3	463.1	439.0	417.2	408.0
40°	534.4	448.2	385.0	329.8	290.7	275.8	263.2	257.4
42.5°	329.8	274.7	237.9	204.6	182.7	174.7	168.9	165.5
45°	188.5	163.2	147.1	128.7	118.4	113.8	110.3	108.0
47.5°	104.6	97.7	91.9	83.9	77.0	73.5	72.4	71.2
50°	58.6	59.8	59.8	55.2	51.7	48.3	46.0	44.8
52.5°	34.5	36.8	37.9	34.5	29.9	27.6	27.6	26.4
55°	21.8	21.8	21.8	21.8	20.7	19.5	19.5	19.5
57.5°	14.9	14.9	16.1	16.1	16.1	14.9	14.9	13.8
60°	11.5	11.5	11.5	11.5	11.5	11.5	10.3	10.3
62.5°	9.2	9.2	9.2	9.2	9.2	8.0	8.0	8.0
65°	6.9	6.9	6.9	6.9	6.9	5.7	5.7	5.7
67.5°	4.6	5.7	4.6	4.6	4.6	4.6	4.6	4.6
70°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
72.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
75°	2.3	2.3	2.3	2.3	2.3	1.1	1.1	1.1
77.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	0.0	1.1
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



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









(END OF REPORT)