

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: P136787

Luminaire Tested: **LDSQ6A20D010TE ESQ6A20840 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136787
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 ESQ6A20840 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: 2591.0 lumens
Efficiency: N/A
Efficacy: 79.0 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

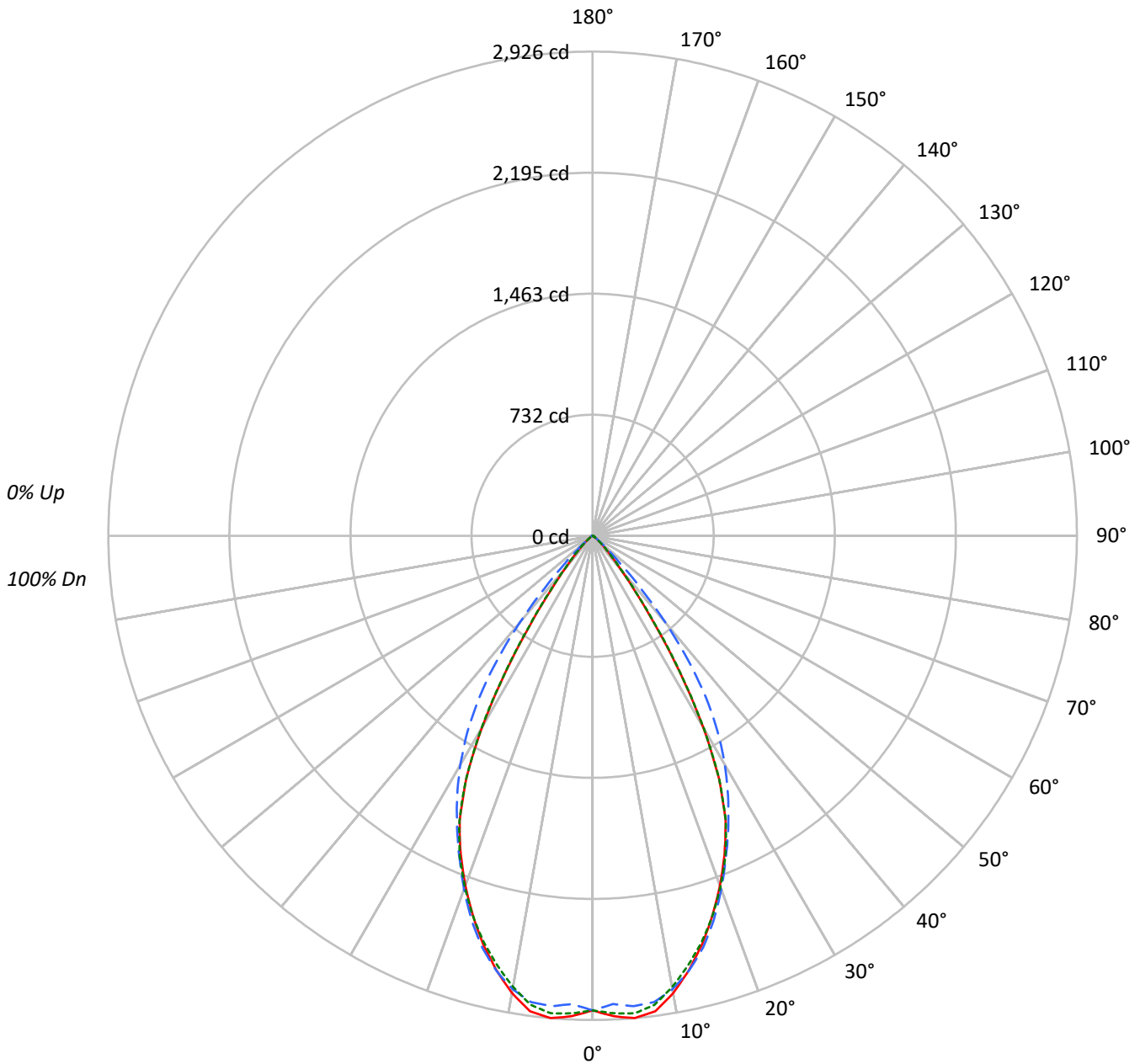
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	146956	146956	146956
5°	150490	146777	149004
10°	145971	144780	144030
15°	135552	136698	134847
20°	122607	123850	123065
25°	107398	109574	107669
30°	79082	94596	79437
35°	41091	74650	41991
40°	17304	45785	18027
45°	7935	17000	8196
50°	3643	5086	3739
55°	1831	2046	1831
60°	1107	1230	1107
65°	727	873	727
70°	539	539	539
75°	238	475	238
80°	354	354	354
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.4	10.5
10°-20°	713.5	27.5
20°-30°	872.4	33.7
30°-40°	560.6	21.6
40°-50°	139.9	5.4
50°-60°	23.4	0.9
60°-70°	7.1	0.3
70°-80°	2.1	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°	1857.4	71.7
0°-40°	2418.0	93.3
0°-60°	2581.3	99.6
0°-90°	2591.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2591.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2868	2868	2868	2868	2868	
5°	2926	2863	2854	2857	2897	275
15°	2555	2569	2577	2548	2542	713
25°	1900	1951	1938	1957	1904	847
35°	657	867	1193	882	671	434
45°	110	137	235	144	113	95
55°	20	23	23	23	20	20
65°	6	7	7	7	6	7
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°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2906.5	2834.4	2890.9	2886.1	2838.0	2847.6	2856.0	2854.8	2853.6	2832.0	2882.5
5°	2925.8	2852.4	2910.1	2902.9	2858.4	2868.0	2872.9	2875.3	2869.2	2853.6	2901.7
7.5°	2898.1	2829.5	2884.9	2876.5	2841.6	2850.0	2853.6	2859.6	2851.2	2842.8	2888.5
10°	2805.5	2747.7	2799.5	2793.5	2770.6	2780.2	2782.6	2792.3	2782.6	2782.6	2823.5
12.5°	2687.6	2643.1	2690.0	2685.2	2676.8	2687.6	2684.0	2700.8	2686.4	2691.2	2728.5
15°	2555.3	2526.4	2564.9	2563.7	2564.9	2573.3	2562.5	2574.5	2561.3	2576.9	2609.4
17.5°	2406.1	2392.8	2422.9	2424.1	2433.7	2436.2	2419.3	2434.9	2415.7	2433.7	2461.4
20°	2248.5	2250.9	2274.9	2271.3	2285.8	2278.6	2254.5	2270.1	2250.9	2271.3	2293.0
22.5°	2082.5	2102.9	2116.1	2113.7	2133.0	2123.4	2093.3	2100.5	2081.3	2104.1	2117.3
25°	1899.6	1922.5	1932.1	1932.1	1952.5	1948.9	1922.5	1934.5	1916.4	1938.1	1945.3
27.5°	1650.6	1679.4	1686.7	1701.1	1736.0	1743.2	1732.4	1756.4	1749.2	1772.1	1769.7
30°	1336.6	1365.4	1376.3	1405.1	1461.7	1495.4	1513.4	1560.3	1572.4	1598.8	1585.6
32.5°	985.3	1009.3	1025.0	1068.3	1142.9	1211.5	1272.8	1342.6	1379.9	1408.8	1384.7
35°	656.9	674.9	691.7	745.9	824.1	909.5	998.5	1098.4	1162.1	1193.4	1160.9
37.5°	412.6	424.7	435.5	475.2	537.8	617.2	712.2	826.5	914.3	951.6	910.7
40°	258.7	265.9	271.9	295.9	334.4	382.6	463.2	559.4	649.6	684.5	646.0
42.5°	166.0	169.6	173.2	186.5	206.9	237.0	281.5	341.7	404.2	428.3	403.0
45°	109.5	110.7	111.9	119.1	129.9	144.4	167.2	194.9	225.0	234.6	223.8
47.5°	72.2	72.2	73.4	78.2	84.2	92.6	101.1	108.3	117.9	122.7	116.7
50°	45.7	46.9	48.1	51.7	55.3	58.9	61.4	61.4	63.8	63.8	62.6
52.5°	27.7	27.7	28.9	30.1	34.9	38.5	38.5	36.1	36.1	36.1	34.9
55°	20.5	20.5	20.5	21.7	22.9	22.9	22.9	22.9	22.9	22.9	21.7
57.5°	15.6	15.6	15.6	16.8	16.8	16.8	16.8	15.6	15.6	15.6	15.6
60°	10.8	10.8	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	10.8
62.5°	8.4	8.4	8.4	9.6	9.6	9.6	9.6	9.6	9.6	8.4	8.4
65°	6.0	6.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
67.5°	4.8	4.8	4.8	4.8	4.8	4.8	6.0	4.8	4.8	4.8	4.8
70°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
75°	1.2	1.2	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2894.5	2898.1	2845.2	2856.0	2894.5	2856.0	2857.2	2888.5
5°	2905.3	2904.1	2850.0	2863.2	2886.1	2858.4	2859.6	2896.9
7.5°	2881.3	2870.4	2816.3	2832.0	2838.0	2818.7	2818.7	2859.6
10°	2806.7	2788.6	2738.1	2753.8	2742.9	2730.9	2727.3	2768.2
12.5°	2709.2	2688.8	2645.5	2659.9	2633.5	2633.5	2622.6	2659.9
15°	2587.7	2569.7	2539.6	2556.5	2516.8	2525.2	2508.3	2542.0
17.5°	2442.2	2430.1	2413.3	2433.7	2386.8	2401.3	2378.4	2407.3
20°	2274.9	2268.9	2266.5	2287.0	2238.9	2262.9	2236.4	2256.9
22.5°	2101.7	2101.7	2114.9	2142.6	2089.7	2116.1	2084.9	2096.9
25°	1930.9	1932.1	1947.7	1967.0	1915.2	1938.1	1903.2	1904.4
27.5°	1749.2	1738.4	1755.2	1751.6	1686.7	1699.9	1662.6	1655.4
30°	1549.5	1517.0	1505.0	1471.3	1397.9	1395.5	1357.0	1342.6
32.5°	1330.6	1269.2	1231.9	1163.3	1069.5	1047.8	1013.0	996.1
35°	1087.5	994.9	927.5	837.3	744.7	713.4	685.7	671.3
37.5°	820.5	714.6	637.6	551.0	484.8	459.6	436.7	427.1
40°	559.4	469.2	403.0	345.3	304.4	288.7	275.5	269.5
42.5°	345.3	287.5	249.0	214.1	191.3	182.9	176.8	173.2
45°	197.3	170.8	154.0	134.7	123.9	119.1	115.5	113.1
47.5°	109.5	102.3	96.2	87.8	80.6	77.0	75.8	74.6
50°	61.4	62.6	62.6	57.7	54.1	50.5	48.1	46.9
52.5°	36.1	38.5	39.7	36.1	31.3	28.9	28.9	27.7
55°	22.9	22.9	22.9	22.9	21.7	20.5	20.5	20.5
57.5°	15.6	15.6	16.8	16.8	16.8	15.6	15.6	14.4
60°	12.0	12.0	12.0	12.0	12.0	12.0	10.8	10.8
62.5°	9.6	9.6	9.6	9.6	9.6	8.4	8.4	8.4
65°	7.2	7.2	7.2	7.2	7.2	6.0	6.0	6.0
67.5°	4.8	6.0	4.8	4.8	4.8	4.8	4.8	4.8
70°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
75°	2.4	2.4	2.4	2.4	2.4	1.2	1.2	1.2
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	1.2
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)