

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: P136791

Luminaire Tested: **LDSQ6A20D010TE ESQ6A20940 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136791
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 ESQ6A20940 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: 2388.9 lumens
Efficiency: N/A
Efficacy: 72.8 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

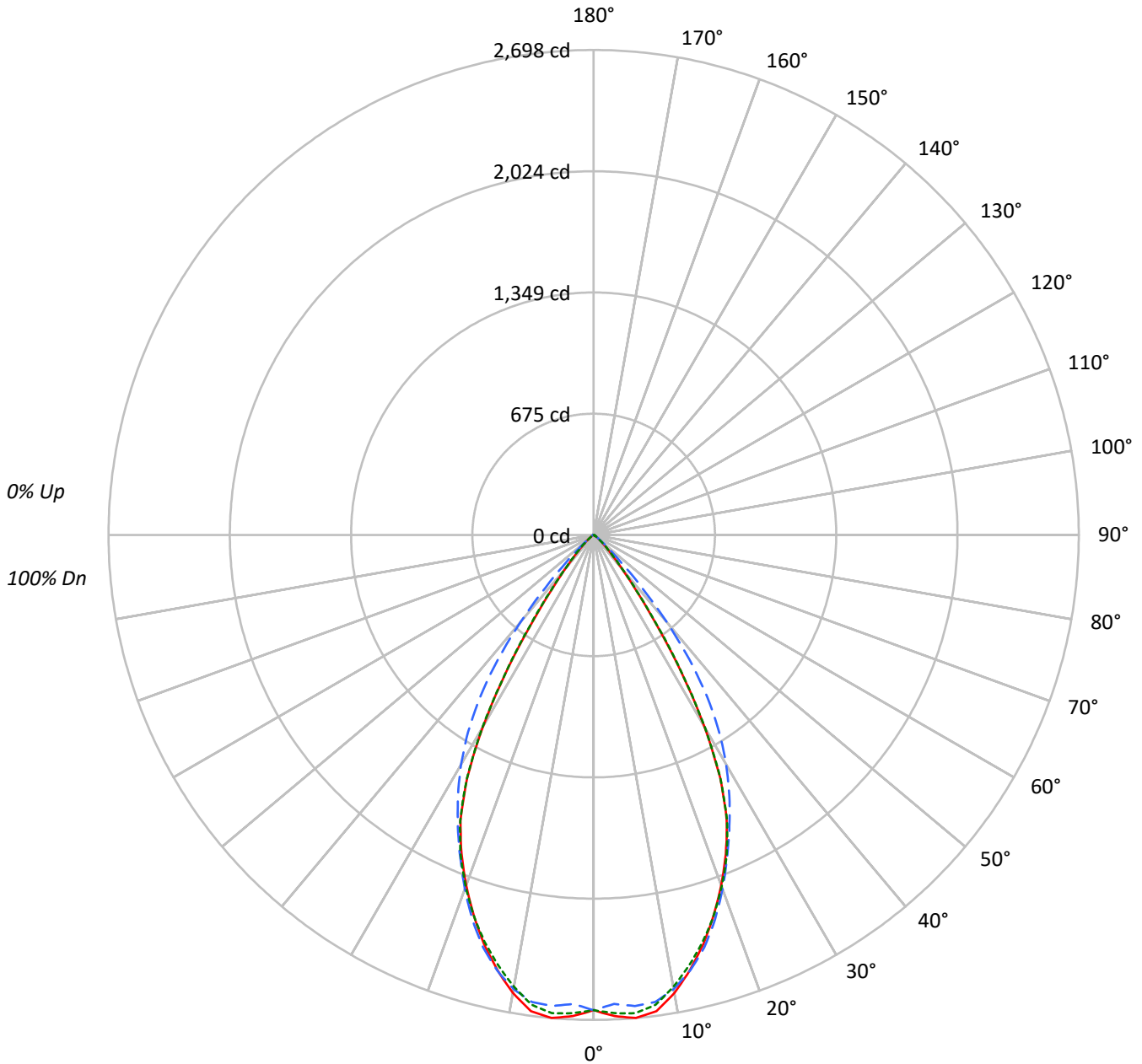
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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°	135494	135494	135494
5°	138753	135327	137379
10°	134587	133489	132797
15°	124980	126035	124327
20°	113043	114188	113468
25°	99019	101026	99273
30°	72911	87218	73242
35°	37888	68826	38714
40°	15953	42214	16622
45°	7319	15674	7558
50°	3356	4687	3444
55°	1688	1885	1688
60°	1025	1138	1025
65°	667	800	667
70°	494	494	494
75°	218	436	218
80°	325	325	325
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.3	10.5
10°-20°	657.9	27.5
20°-30°	804.4	33.7
30°-40°	516.9	21.6
40°-50°	129.0	5.4
50°-60°	21.6	0.9
60°-70°	6.5	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°	1712.5	71.7
0°-40°	2229.4	93.3
0°-60°	2380.0	99.6
0°-90°	2388.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2388.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2644	2644	2644	2644	2644	
5°	2698	2640	2631	2634	2671	254
15°	2356	2369	2376	2349	2344	657
25°	1751	1799	1787	1805	1756	781
35°	606	799	1100	814	619	401
45°	101	126	216	133	104	87
55°	19	21	21	21	19	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°	2644.3	2644.3	2644.3	2644.3	2644.3	2644.3	2644.3	2644.3	2644.3	2644.3	2644.3
2.5°	2679.8	2613.3	2665.4	2661.0	2616.6	2625.5	2633.2	2632.1	2631.0	2611.1	2657.7
5°	2697.6	2629.9	2683.1	2676.5	2635.4	2644.3	2648.8	2651.0	2645.4	2631.0	2675.4
7.5°	2672.0	2608.8	2659.9	2652.1	2620.0	2627.7	2631.0	2636.6	2628.8	2621.1	2663.2
10°	2586.7	2533.4	2581.1	2575.6	2554.5	2563.3	2565.6	2574.5	2565.6	2565.6	2603.3
12.5°	2478.0	2436.9	2480.2	2475.8	2468.0	2478.0	2474.6	2490.1	2476.9	2481.3	2515.7
15°	2356.0	2329.3	2364.8	2363.7	2364.8	2372.6	2362.6	2373.7	2361.5	2375.9	2405.9
17.5°	2218.4	2206.2	2233.9	2235.0	2243.9	2246.2	2230.6	2245.0	2227.3	2243.9	2269.4
20°	2073.1	2075.3	2097.5	2094.1	2107.5	2100.9	2078.6	2093.0	2075.3	2094.1	2114.1
22.5°	1920.1	1938.9	1951.0	1948.8	1966.6	1957.8	1930.0	1936.7	1919.0	1940.0	1952.2
25°	1751.4	1772.5	1781.4	1781.4	1800.2	1796.9	1772.5	1783.6	1766.9	1786.9	1793.6
27.5°	1521.9	1548.4	1555.1	1568.4	1600.6	1607.2	1597.3	1619.4	1612.8	1633.9	1631.7
30°	1232.3	1258.9	1268.9	1295.5	1347.7	1378.8	1395.4	1438.6	1449.8	1474.1	1461.9
32.5°	908.4	930.6	945.0	985.0	1053.8	1117.0	1173.5	1237.9	1272.3	1298.9	1276.7
35°	605.7	622.3	637.7	687.7	759.8	838.6	920.6	1012.7	1071.5	1100.3	1070.3
37.5°	380.4	391.6	401.5	438.1	495.9	569.1	656.6	762.0	843.0	877.4	839.7
40°	238.5	245.2	250.7	272.8	308.3	352.8	427.1	515.8	598.9	631.1	595.6
42.5°	153.1	156.4	159.7	172.0	190.8	218.5	259.5	315.0	372.7	394.9	371.6
45°	101.0	102.1	103.2	109.8	119.8	133.1	154.2	179.7	207.4	216.3	206.3
47.5°	66.6	66.6	67.7	72.1	77.6	85.4	93.2	99.9	108.7	113.1	107.6
50°	42.1	43.2	44.3	47.7	51.0	54.3	56.6	56.6	58.8	58.8	57.7
52.5°	25.5	25.5	26.6	27.8	32.2	35.5	35.5	33.3	33.3	33.3	32.2
55°	18.9	18.9	18.9	20.0	21.1	21.1	21.1	21.1	21.1	21.1	20.0
57.5°	14.4	14.4	14.4	15.5	15.5	15.5	15.5	14.4	14.4	14.4	14.4
60°	10.0	10.0	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	10.0
62.5°	7.7	7.7	7.7	8.9	8.9	8.9	8.9	8.9	8.9	7.7	7.7
65°	5.5	5.5	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
67.5°	4.4	4.4	4.4	4.4	4.4	4.4	5.5	4.4	4.4	4.4	4.4
70°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
72.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
75°	1.1	1.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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°	2644.3	2644.3	2644.3	2644.3	2644.3	2644.3	2644.3	2644.3
2.5°	2668.7	2672.0	2623.3	2633.2	2668.7	2633.2	2634.3	2663.2
5°	2678.7	2677.6	2627.7	2639.9	2661.0	2635.4	2636.6	2670.9
7.5°	2656.6	2646.5	2596.6	2611.1	2616.6	2598.8	2598.8	2636.6
10°	2587.8	2571.1	2524.5	2539.0	2529.0	2517.9	2514.6	2552.3
12.5°	2497.9	2479.1	2439.2	2452.4	2428.1	2428.1	2418.0	2452.4
15°	2385.9	2369.3	2341.5	2357.1	2320.5	2328.2	2312.7	2343.7
17.5°	2251.7	2240.6	2225.1	2243.9	2200.6	2214.0	2192.9	2219.5
20°	2097.5	2091.9	2089.7	2108.6	2064.3	2086.4	2062.0	2080.9
22.5°	1937.8	1937.8	1949.9	1975.5	1926.7	1951.0	1922.3	1933.3
25°	1780.3	1781.4	1795.8	1813.6	1765.8	1786.9	1754.8	1755.9
27.5°	1612.8	1602.8	1618.3	1615.0	1555.1	1567.3	1532.9	1526.3
30°	1428.6	1398.7	1387.6	1356.5	1288.9	1286.7	1251.2	1237.9
32.5°	1226.8	1170.2	1135.8	1072.6	986.1	966.1	934.0	918.4
35°	1002.7	917.3	855.2	772.0	686.6	657.8	632.2	618.9
37.5°	756.5	658.9	587.9	508.0	447.0	423.8	402.6	393.8
40°	515.8	432.6	371.6	318.4	280.7	266.2	254.0	248.5
42.5°	318.4	265.1	229.6	197.4	176.4	168.6	163.0	159.7
45°	181.9	157.5	142.0	124.2	114.2	109.8	106.5	104.3
47.5°	101.0	94.3	88.7	81.0	74.3	71.0	69.9	68.8
50°	56.6	57.7	57.7	53.2	49.9	46.6	44.3	43.2
52.5°	33.3	35.5	36.6	33.3	28.9	26.6	26.6	25.5
55°	21.1	21.1	21.1	21.1	20.0	18.9	18.9	18.9
57.5°	14.4	14.4	15.5	15.5	15.5	14.4	14.4	13.3
60°	11.1	11.1	11.1	11.1	11.1	11.1	10.0	10.0
62.5°	8.9	8.9	8.9	8.9	8.9	7.7	7.7	7.7
65°	6.6	6.6	6.6	6.6	6.6	5.5	5.5	5.5
67.5°	4.4	5.5	4.4	4.4	4.4	4.4	4.4	4.4
70°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
72.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
75°	2.2	2.2	2.2	2.2	2.2	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)