

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: P136784

Luminaire Tested: **LDSQ6A20D010TE ESQ6A20827 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136784
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 ESQ6A20827 6LSQ1LI
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 2700K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2364.0 lumens
Efficiency: N/A
Efficacy: 72.1 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

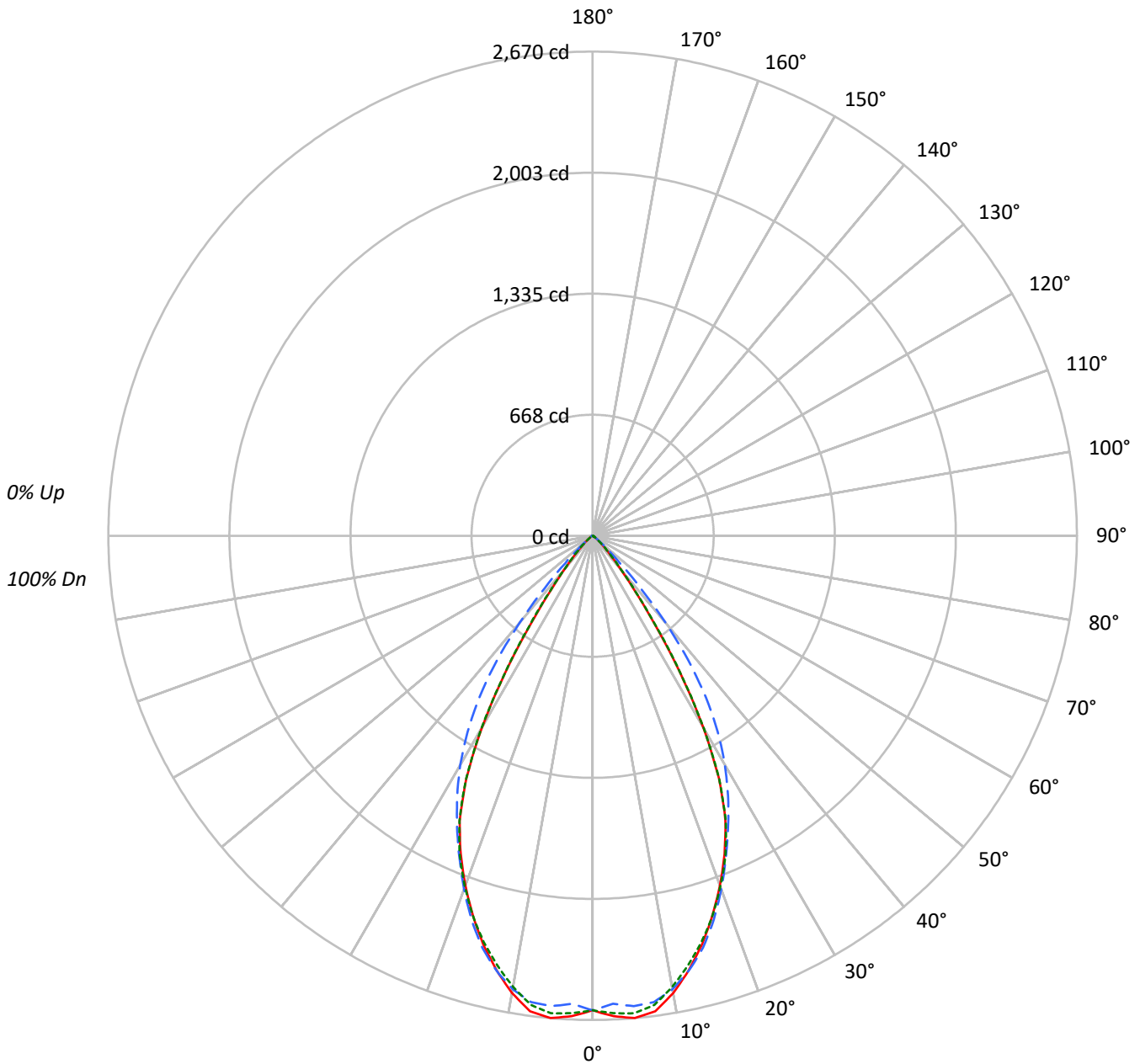
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	134084	134084	134084
5°	137307	133918	135949
10°	133182	132095	131413
15°	123675	124720	123033
20°	111865	112999	112285
25°	97990	99974	98239
30°	72154	86312	72479
35°	37488	68113	38313
40°	15786	41779	16448
45°	7239	15507	7478
50°	3324	4639	3412
55°	1671	1867	1671
60°	1015	1127	1015
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°	247.6	10.5
10°-20°	651.0	27.5
20°-30°	796.0	33.7
30°-40°	511.5	21.6
40°-50°	127.6	5.4
50°-60°	21.4	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°	1694.7	71.7
0°-40°	2206.2	93.3
0°-60°	2355.2	99.6
0°-90°	2364.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2364.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2617	2617	2617	2617	2617	
5°	2670	2612	2604	2606	2643	251
15°	2331	2344	2351	2325	2319	651
25°	1733	1780	1768	1786	1738	773
35°	599	791	1089	805	612	396
45°	100	125	214	132	103	86
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°	2616.8	2616.8	2616.8	2616.8	2616.8	2616.8	2616.8	2616.8	2616.8	2616.8	2616.8
2.5°	2651.9	2586.0	2637.6	2633.2	2589.3	2598.1	2605.8	2604.7	2603.6	2583.8	2629.9
5°	2669.5	2602.5	2655.2	2648.6	2608.0	2616.8	2621.2	2623.4	2617.9	2603.6	2647.5
7.5°	2644.2	2581.6	2632.1	2624.5	2592.6	2600.3	2603.6	2609.1	2601.4	2593.7	2635.4
10°	2559.7	2507.0	2554.2	2548.7	2527.9	2536.6	2538.8	2547.6	2538.8	2538.8	2576.2
12.5°	2452.1	2411.5	2454.3	2449.9	2442.2	2452.1	2448.8	2464.2	2451.0	2455.4	2489.4
15°	2331.4	2305.0	2340.2	2339.1	2340.2	2347.8	2338.0	2348.9	2336.9	2351.1	2380.8
17.5°	2195.3	2183.2	2210.6	2211.7	2220.5	2222.7	2207.4	2221.6	2204.1	2220.5	2245.8
20°	2051.5	2053.7	2075.6	2072.3	2085.5	2078.9	2057.0	2071.2	2053.7	2072.3	2092.1
22.5°	1900.0	1918.7	1930.7	1928.6	1946.1	1937.3	1909.9	1916.5	1898.9	1919.8	1931.8
25°	1733.2	1754.0	1762.8	1762.8	1781.5	1778.2	1754.0	1765.0	1748.5	1768.3	1774.9
27.5°	1506.0	1532.3	1538.9	1552.1	1583.9	1590.5	1580.6	1602.6	1596.0	1616.8	1614.6
30°	1219.5	1245.8	1255.7	1282.0	1333.6	1364.4	1380.8	1423.6	1434.6	1458.8	1446.7
32.5°	899.0	920.9	935.2	974.7	1042.8	1105.3	1161.3	1225.0	1259.0	1285.3	1263.4
35°	599.3	615.8	631.1	680.5	751.9	829.8	911.0	1002.1	1060.3	1088.9	1059.2
37.5°	376.5	387.5	397.3	433.6	490.6	563.1	649.8	754.1	834.2	868.2	830.9
40°	236.0	242.6	248.1	270.0	305.1	349.0	422.6	510.4	592.7	624.6	589.4
42.5°	151.5	154.8	158.1	170.1	188.8	216.2	256.8	311.7	368.8	390.8	367.7
45°	99.9	101.0	102.1	108.7	118.5	131.7	152.6	177.8	205.3	214.0	204.2
47.5°	65.9	65.9	67.0	71.3	76.8	84.5	92.2	98.8	107.6	112.0	106.5
50°	41.7	42.8	43.9	47.2	50.5	53.8	56.0	56.0	58.2	58.2	57.1
52.5°	25.2	25.2	26.3	27.4	31.8	35.1	35.1	32.9	32.9	32.9	31.8
55°	18.7	18.7	18.7	19.8	20.9	20.9	20.9	20.9	20.9	20.9	19.8
57.5°	14.3	14.3	14.3	15.4	15.4	15.4	15.4	14.3	14.3	14.3	14.3
60°	9.9	9.9	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	9.9
62.5°	7.7	7.7	7.7	8.8	8.8	8.8	8.8	8.8	8.8	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°	2616.8	2616.8	2616.8	2616.8	2616.8	2616.8	2616.8	2616.8
2.5°	2640.9	2644.2	2595.9	2605.8	2640.9	2605.8	2606.9	2635.4
5°	2650.8	2649.7	2600.3	2612.4	2633.2	2608.0	2609.1	2643.1
7.5°	2628.8	2619.0	2569.6	2583.8	2589.3	2571.8	2571.8	2609.1
10°	2560.8	2544.3	2498.2	2512.5	2502.6	2491.6	2488.3	2525.7
12.5°	2471.9	2453.2	2413.7	2426.9	2402.7	2402.7	2392.9	2426.9
15°	2361.0	2344.6	2317.1	2332.5	2296.3	2303.9	2288.6	2319.3
17.5°	2228.2	2217.2	2201.9	2220.5	2177.7	2190.9	2170.0	2196.4
20°	2075.6	2070.1	2068.0	2086.6	2042.7	2064.7	2040.5	2059.2
22.5°	1917.6	1917.6	1929.6	1954.9	1906.6	1930.7	1902.2	1913.2
25°	1761.7	1762.8	1777.1	1794.6	1747.4	1768.3	1736.5	1737.6
27.5°	1596.0	1586.1	1601.5	1598.2	1538.9	1551.0	1516.9	1510.4
30°	1413.8	1384.1	1373.1	1342.4	1275.5	1273.3	1238.1	1225.0
32.5°	1214.0	1158.0	1124.0	1061.4	975.8	956.0	924.2	908.8
35°	992.3	907.7	846.3	764.0	679.4	650.9	625.7	612.5
37.5°	748.6	652.0	581.7	502.7	442.3	419.3	398.4	389.7
40°	510.4	428.1	367.7	315.0	277.7	263.4	251.4	245.9
42.5°	315.0	262.3	227.2	195.4	174.5	166.8	161.4	158.1
45°	180.0	155.9	140.5	122.9	113.1	108.7	105.4	103.2
47.5°	99.9	93.3	87.8	80.1	73.5	70.2	69.2	68.1
50°	56.0	57.1	57.1	52.7	49.4	46.1	43.9	42.8
52.5°	32.9	35.1	36.2	32.9	28.5	26.3	26.3	25.2
55°	20.9	20.9	20.9	20.9	19.8	18.7	18.7	18.7
57.5°	14.3	14.3	15.4	15.4	15.4	14.3	14.3	13.2
60°	11.0	11.0	11.0	11.0	11.0	11.0	9.9	9.9
62.5°	8.8	8.8	8.8	8.8	8.8	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)