

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: P136788

Luminaire Tested: **LDSQ6A20D010TE ESQ6A20927 6LSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136788
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 ESQ6A20927 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: 2179.6 lumens
Efficiency: N/A
Efficacy: 66.5 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

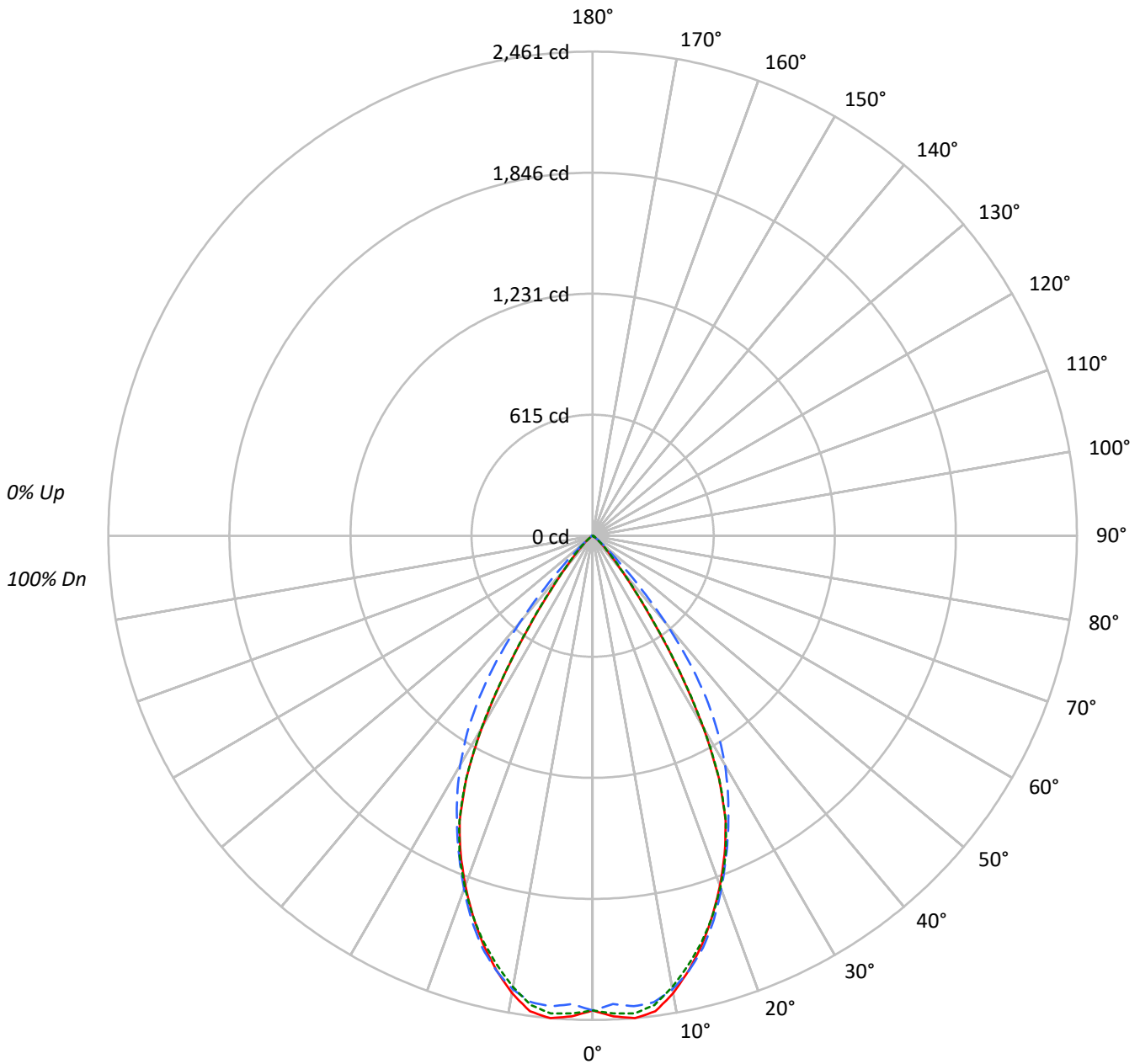
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	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°	123626	123626	123626
5°	126598	123471	125343
10°	122792	121793	121163
15°	114031	114991	113437
20°	103140	104187	103527
25°	90346	92178	90578
30°	66527	79579	66823
35°	34566	62803	35323
40°	14555	38521	15164
45°	6674	14297	6899
50°	3061	4281	3149
55°	1537	1724	1537
60°	933	1035	933
65°	618	740	618
70°	449	449	449
75°	198	396	198
80°	295	295	295
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.3	10.5
10°-20°	600.2	27.5
20°-30°	733.9	33.7
30°-40°	471.6	21.6
40°-50°	117.7	5.4
50°-60°	19.7	0.9
60°-70°	6.0	0.3
70°-80°	1.8	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°	1562.5	71.7
0°-40°	2034.1	93.3
0°-60°	2171.5	99.6
0°-90°	2179.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2179.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2413	2413	2413	2413	2413	
5°	2461	2409	2400	2403	2437	232
15°	2150	2161	2168	2144	2138	600
25°	1598	1641	1630	1647	1602	713
35°	553	729	1004	742	565	365
45°	92	115	197	121	95	80
55°	17	19	19	19	17	17
65°	5	6	6	6	5	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°	2412.7	2412.7	2412.7	2412.7	2412.7	2412.7	2412.7	2412.7	2412.7	2412.7	2412.7
2.5°	2445.1	2384.3	2431.9	2427.8	2387.3	2395.4	2402.5	2401.5	2400.5	2382.3	2424.8
5°	2461.3	2399.5	2448.1	2442.0	2404.6	2412.7	2416.7	2418.8	2413.7	2400.5	2441.0
7.5°	2438.0	2380.2	2426.8	2419.8	2390.4	2397.5	2400.5	2405.6	2398.5	2391.4	2429.8
10°	2360.0	2311.5	2355.0	2349.9	2330.7	2338.7	2340.8	2348.9	2340.8	2340.8	2375.3
12.5°	2260.8	2223.4	2262.9	2258.8	2251.7	2260.8	2257.8	2272.0	2259.8	2263.9	2295.2
15°	2149.6	2125.2	2157.7	2156.7	2157.7	2164.7	2155.6	2165.7	2154.6	2167.7	2195.1
17.5°	2024.1	2012.9	2038.2	2039.2	2047.3	2049.3	2035.2	2048.3	2032.2	2047.3	2070.6
20°	1891.5	1893.5	1913.7	1910.7	1922.8	1916.7	1896.6	1909.6	1893.5	1910.7	1928.9
22.5°	1751.8	1769.0	1780.1	1778.2	1794.3	1786.2	1760.9	1767.0	1750.8	1770.1	1781.1
25°	1598.0	1617.2	1625.3	1625.3	1642.5	1639.5	1617.2	1627.3	1612.1	1630.4	1636.5
27.5°	1388.5	1412.8	1418.9	1431.0	1460.4	1466.4	1457.3	1477.6	1471.5	1490.7	1488.7
30°	1124.4	1148.6	1157.8	1182.0	1229.6	1258.0	1273.1	1312.6	1322.7	1345.0	1333.9
32.5°	828.9	849.1	862.3	898.7	961.5	1019.1	1070.7	1129.4	1160.8	1185.0	1164.9
35°	552.6	567.8	581.9	627.4	693.3	765.1	839.9	923.9	977.6	1004.0	976.6
37.5°	347.1	357.3	366.3	399.8	452.3	519.2	599.1	695.3	769.1	800.5	766.1
40°	217.6	223.7	228.7	248.9	281.3	321.8	389.6	470.6	546.5	575.9	543.4
42.5°	139.7	142.7	145.8	156.8	174.1	199.3	236.8	287.4	340.0	360.3	339.0
45°	92.1	93.1	94.1	100.2	109.3	121.4	140.7	163.9	189.3	197.3	188.3
47.5°	60.8	60.8	61.8	65.7	70.8	77.9	85.0	91.1	99.2	103.3	98.2
50°	38.4	39.5	40.5	43.5	46.6	49.6	51.6	51.6	53.7	53.7	52.6
52.5°	23.2	23.2	24.2	25.3	29.3	32.4	32.4	30.3	30.3	30.3	29.3
55°	17.2	17.2	17.2	18.3	19.3	19.3	19.3	19.3	19.3	19.3	18.3
57.5°	13.2	13.2	13.2	14.2	14.2	14.2	14.2	13.2	13.2	13.2	13.2
60°	9.1	9.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	9.1
62.5°	7.1	7.1	7.1	8.1	8.1	8.1	8.1	8.1	8.1	7.1	7.1
65°	5.1	5.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
67.5°	4.1	4.1	4.1	4.1	4.1	4.1	5.1	4.1	4.1	4.1	4.1
70°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
72.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
75°	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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°	2412.7	2412.7	2412.7	2412.7	2412.7	2412.7	2412.7	2412.7
2.5°	2434.9	2438.0	2393.4	2402.5	2434.9	2402.5	2403.6	2429.8
5°	2444.0	2443.0	2397.5	2408.6	2427.8	2404.6	2405.6	2436.9
7.5°	2423.8	2414.7	2369.2	2382.3	2387.3	2371.2	2371.2	2405.6
10°	2361.1	2345.8	2303.3	2316.5	2307.4	2297.3	2294.2	2328.7
12.5°	2279.1	2261.9	2225.4	2237.6	2215.3	2215.3	2206.3	2237.6
15°	2176.8	2161.7	2136.4	2150.6	2117.2	2124.2	2110.1	2138.4
17.5°	2054.4	2044.3	2030.2	2047.3	2007.8	2020.0	2000.7	2025.1
20°	1913.7	1908.6	1906.7	1923.8	1883.4	1903.7	1881.3	1898.6
22.5°	1768.0	1768.0	1779.1	1802.4	1757.9	1780.1	1753.8	1764.0
25°	1624.3	1625.3	1638.5	1654.6	1611.1	1630.4	1601.1	1602.1
27.5°	1471.5	1462.4	1476.6	1473.5	1418.9	1430.0	1398.6	1392.6
30°	1303.5	1276.1	1266.0	1237.7	1176.0	1174.0	1141.5	1129.4
32.5°	1119.3	1067.7	1036.3	978.6	899.7	881.4	852.1	837.9
35°	914.9	836.9	780.3	704.4	626.4	600.1	576.9	564.7
37.5°	690.2	601.1	536.3	463.5	407.8	386.6	367.3	359.3
40°	470.6	394.7	339.0	290.4	256.0	242.9	231.8	226.7
42.5°	290.4	241.8	209.5	180.2	160.9	153.8	148.8	145.8
45°	166.0	143.7	129.5	113.3	104.3	100.2	97.2	95.2
47.5°	92.1	86.0	81.0	73.9	67.8	64.7	63.8	62.8
50°	51.6	52.6	52.6	48.6	45.5	42.5	40.5	39.5
52.5°	30.3	32.4	33.4	30.3	26.3	24.2	24.2	23.2
55°	19.3	19.3	19.3	19.3	18.3	17.2	17.2	17.2
57.5°	13.2	13.2	14.2	14.2	14.2	13.2	13.2	12.2
60°	10.1	10.1	10.1	10.1	10.1	10.1	9.1	9.1
62.5°	8.1	8.1	8.1	8.1	8.1	7.1	7.1	7.1
65°	6.1	6.1	6.1	6.1	6.1	5.1	5.1	5.1
67.5°	4.1	5.1	4.1	4.1	4.1	4.1	4.1	4.1
70°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
72.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
75°	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0
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)