

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: P136839

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10827 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136839
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23674)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQ6A10D010TE ESQ6A10827 6LSQ1H
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT
MEDIUM DISTRIBUTION WITH SEMI-SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 2700K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1062.0 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.02 / 1.05
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

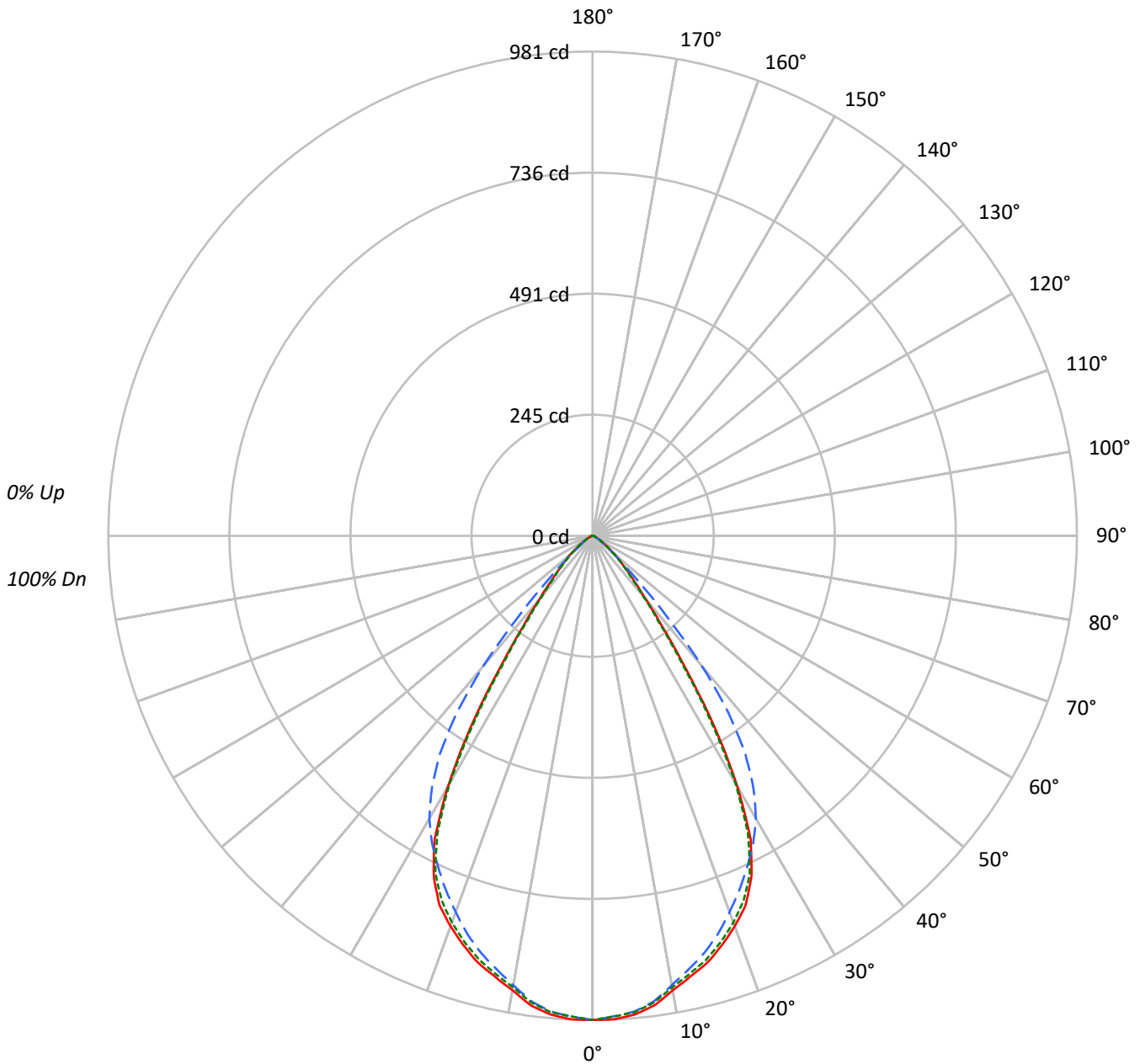
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93																			
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85																			
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	86	83	80	79																			
4	96	88	82	77	94	86	81	77	84	80	76	82	78	75	80	77	74	72																			
5	90	81	75	71	89	80	75	70	79	74	70	77	73	69	75	72	68	67																			
6	85	76	70	65	84	75	69	65	74	68	64	72	67	64	71	67	63	62																			
7	81	71	65	60	79	70	64	60	69	64	60	68	63	59	67	62	59	57																			
8	77	66	60	56	75	66	60	56	65	59	55	64	59	55	63	58	55	53																			
9	73	62	56	52	71	62	56	52	61	55	52	60	55	51	59	55	51	50																			
10	69	59	53	49	68	58	52	48	57	52	48	57	52	48	56	51	48	47																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	42233	42233	42233
5°	42088	41833	41885
10°	40874	40410	40616
15°	39939	38994	39622
20°	38570	37164	38190
25°	36181	35174	35792
30°	29129	32882	28721
35°	17287	28320	16483
40°	9341	19284	8880
45°	5815	8111	5602
50°	3872	3162	3630
55°	2305	1681	2214
60°	1421	1119	1318
65°	846	723	846
70°	592	592	441
75°	399	399	399
80°	298	298	298
85°	0	593	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.2	8.6
10°-20°	247.8	23.3
20°-30°	338.9	31.9
30°-40°	256.7	24.2
40°-50°	89.1	8.4
50°-60°	26.7	2.5
60°-70°	8.5	0.8
70°-80°	2.6	0.2
80°-90°	0.7	0.1
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°	677.8	63.8
0°-40°	934.5	88.0
0°-60°	1050.3	98.9
0°-90°	1062.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1062.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	974	970	968	969	969	92
15°	896	885	875	882	889	252
25°	762	750	740	746	753	341
35°	329	401	539	396	314	214
45°	96	102	133	100	92	78
55°	31	30	22	29	30	29
65°	8	8	7	8	8	9
75°	2	2	2	2	2	2
85°	0	0	1	1	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	980.9	980.9	980.9	980.9	980.9	980.9	980.9	980.9	980.9	980.9	980.9
2.5°	980.9	976.2	971.5	975.0	979.7	973.8	975.0	975.0	971.5	975.0	972.6
5°	973.8	970.3	965.6	969.1	972.6	967.9	967.9	967.9	965.6	967.9	966.8
7.5°	959.7	955.0	950.2	953.8	957.3	952.6	951.4	952.6	949.1	951.4	950.2
10°	934.9	931.4	926.7	930.2	932.6	926.7	925.5	926.7	922.0	924.3	924.3
12.5°	914.9	912.5	906.6	909.0	910.2	904.3	901.9	901.9	897.2	899.6	898.4
15°	896.0	892.5	886.6	887.8	888.9	880.7	878.3	877.2	872.4	874.8	873.6
17.5°	870.1	867.7	860.6	861.8	860.6	853.6	848.9	847.7	843.0	845.3	843.0
20°	841.8	838.2	831.2	830.0	827.6	819.4	815.8	814.7	808.8	811.1	810.0
22.5°	810.0	805.2	798.2	797.0	794.6	785.2	781.7	779.3	774.6	776.9	774.6
25°	761.6	758.1	752.2	752.2	753.4	747.5	746.3	745.1	739.2	740.4	739.2
27.5°	693.2	690.9	688.5	689.7	695.6	695.6	701.5	703.8	701.5	703.8	701.5
30°	585.9	587.1	594.2	601.3	615.4	626.0	640.2	650.8	655.5	661.4	656.7
32.5°	461.0	457.4	471.6	488.1	510.5	534.1	562.4	584.8	600.1	606.0	598.9
35°	328.9	327.8	340.7	358.4	384.3	418.5	461.0	499.9	527.0	538.8	527.0
37.5°	229.9	231.1	238.2	249.9	270.0	299.5	344.3	392.6	433.9	451.5	431.5
40°	166.2	165.1	169.8	176.8	188.6	207.5	238.2	278.2	319.5	343.1	317.1
42.5°	125.0	123.8	126.1	129.7	135.6	145.0	161.5	182.7	208.7	225.2	205.1
45°	95.5	95.5	95.5	97.9	100.2	103.7	109.6	116.7	126.1	133.2	123.8
47.5°	74.3	74.3	74.3	75.5	76.6	76.6	76.6	75.5	76.6	77.8	75.5
50°	57.8	57.8	57.8	57.8	57.8	56.6	54.2	49.5	48.3	47.2	47.2
52.5°	41.3	41.3	41.3	42.4	43.6	41.3	37.7	34.2	31.8	31.8	31.8
55°	30.7	30.7	30.7	30.7	30.7	28.3	25.9	23.6	22.4	22.4	22.4
57.5°	22.4	22.4	22.4	22.4	21.2	20.0	18.9	17.7	16.5	16.5	16.5
60°	16.5	16.5	16.5	16.5	15.3	14.1	14.1	13.0	13.0	13.0	13.0
62.5°	11.8	11.8	11.8	11.8	11.8	10.6	10.6	9.4	9.4	9.4	9.4
65°	8.3	8.3	8.3	8.3	8.3	8.3	7.1	7.1	7.1	7.1	7.1
67.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
70°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
72.5°	2.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
75°	2.4	2.4	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	1.2	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	1.2	1.2	1.2	1.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2
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°	980.9	980.9	980.9	980.9	980.9	980.9	980.9	980.9
2.5°	972.6	978.5	978.5	973.8	970.3	976.2	977.4	975.0
5°	966.8	971.5	971.5	966.8	963.2	970.3	970.3	969.1
7.5°	950.2	956.1	955.0	951.4	947.9	953.8	956.1	953.8
10°	924.3	930.2	930.2	926.7	923.1	930.2	931.4	929.0
12.5°	899.6	905.4	907.8	904.3	903.1	909.0	911.3	909.0
15°	874.8	881.9	883.0	881.9	881.9	888.9	891.3	888.9
17.5°	845.3	852.4	854.8	853.6	854.8	861.8	865.4	863.0
20°	811.1	817.0	819.4	819.4	820.6	830.0	834.7	833.5
22.5°	774.6	781.7	785.2	786.4	787.5	797.0	801.7	799.3
25°	740.4	746.3	746.3	746.3	745.1	752.2	755.7	753.4
27.5°	699.1	700.3	696.8	688.5	682.6	685.0	687.3	681.4
30°	647.3	640.2	627.2	609.5	594.2	588.3	587.1	577.7
32.5°	581.2	561.2	534.1	503.4	476.3	462.2	456.3	445.6
35°	496.3	458.6	416.2	376.1	345.4	330.1	324.2	313.6
37.5°	387.9	340.7	295.9	261.7	241.7	228.7	225.2	219.3
40°	270.0	232.3	202.8	181.6	168.6	162.7	161.5	158.0
42.5°	178.0	156.8	141.5	130.9	125.0	121.4	121.4	119.1
45°	114.4	107.3	102.6	97.9	94.3	93.1	93.1	92.0
47.5°	74.3	75.5	75.5	74.3	71.9	70.7	71.9	70.7
50°	49.5	53.1	55.4	56.6	55.4	54.2	55.4	54.2
52.5°	34.2	37.7	41.3	42.4	41.3	40.1	40.1	40.1
55°	23.6	25.9	28.3	29.5	29.5	29.5	29.5	29.5
57.5°	17.7	18.9	20.0	21.2	22.4	21.2	22.4	21.2
60°	13.0	14.1	15.3	15.3	16.5	16.5	16.5	15.3
62.5°	9.4	10.6	10.6	11.8	11.8	11.8	11.8	11.8
65°	7.1	7.1	8.3	8.3	8.3	8.3	8.3	8.3
67.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
70°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	3.5
72.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	2.4
75°	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
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	1.2	1.2
85°	1.2	1.2	0.0	1.2	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)