

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: P136844

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10935 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136844
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 ESQ6A10935 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 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1046.6 lumens
Efficiency: N/A
Efficacy: 74.8 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

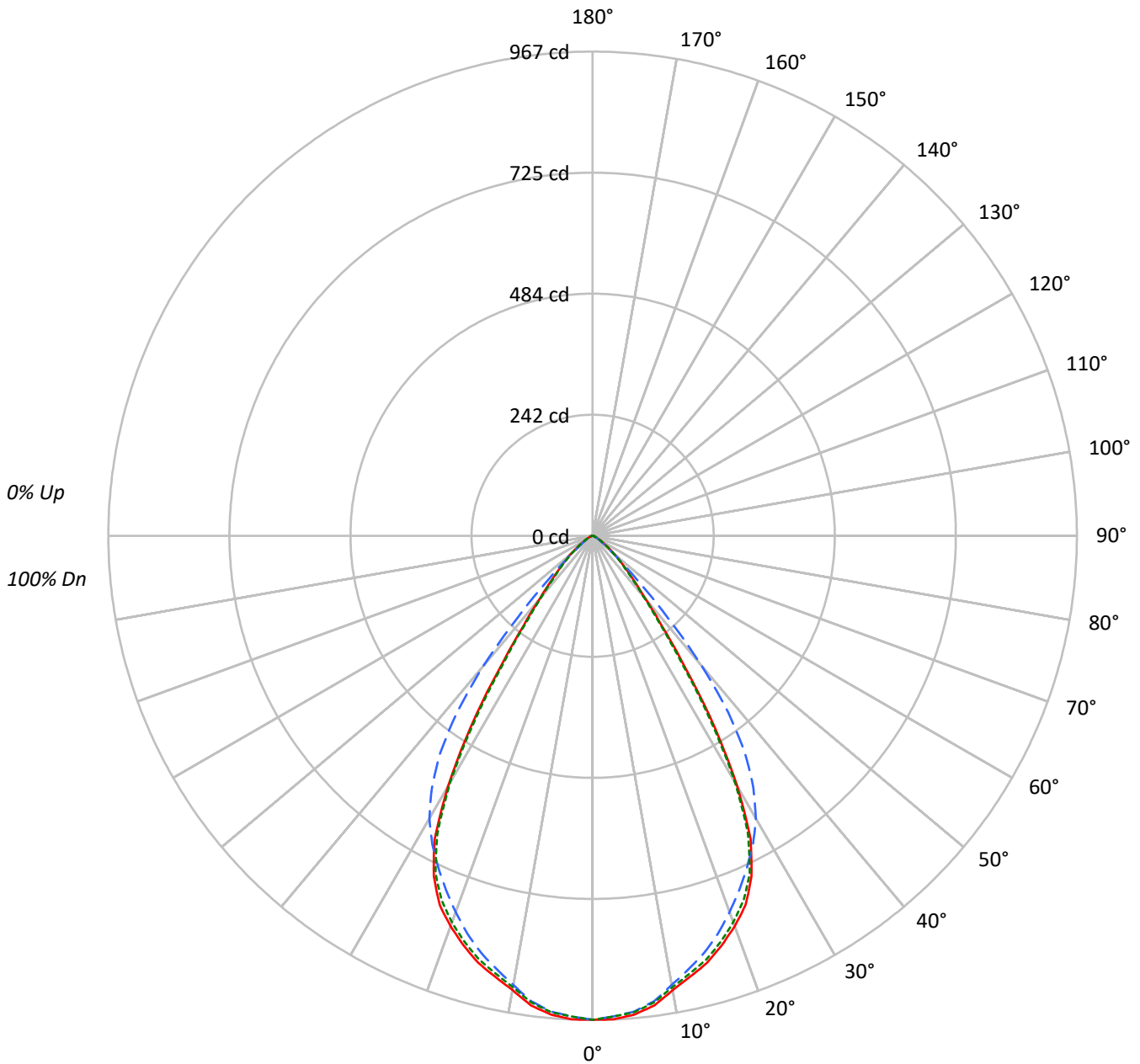
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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				100				
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93				93				
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85				85				
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	86	83	80	79				79				
4	96	88	82	77	94	86	81	77	84	80	76	82	78	75	80	77	74	72				72				
5	90	81	75	71	89	80	75	70	79	74	70	77	73	69	75	72	68	67				67				
6	85	76	70	65	84	75	69	65	74	68	64	72	67	64	71	67	63	62				62				
7	81	71	65	60	79	70	64	60	69	64	60	68	63	59	67	62	59	57				57				
8	77	66	60	56	75	66	60	56	65	59	55	64	59	55	63	58	55	53				53				
9	73	62	56	52	71	62	56	52	61	55	52	60	55	51	59	55	51	50				50				
10	69	59	53	49	68	58	52	48	57	52	48	57	52	48	56	51	48	47				47				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	41618	41618	41618
5°	41478	41223	41275
10°	40279	39820	40026
15°	39355	38423	39047
20°	38007	36623	37631
25°	35659	34661	35269
30°	28706	32405	28304
35°	17035	27910	16241
40°	9206	19003	8751
45°	5730	7995	5517
50°	3811	3115	3577
55°	2267	1651	2177
60°	1395	1102	1300
65°	835	713	835
70°	592	592	441
75°	383	383	383
80°	298	298	298
85°	0	593	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.8	8.6
10°-20°	244.2	23.3
20°-30°	334.0	31.9
30°-40°	252.9	24.2
40°-50°	87.8	8.4
50°-60°	26.3	2.5
60°-70°	8.4	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°	668.0	63.8
0°-40°	920.9	88.0
0°-60°	1035.0	98.9
0°-90°	1046.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1046.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	967	967	967	967	967	
5°	960	956	954	955	955	90
15°	883	872	862	870	876	248
25°	751	740	730	735	742	336
35°	324	396	531	390	309	211
45°	94	101	131	99	91	76
55°	30	29	22	28	29	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°	966.6	966.6	966.6	966.6	966.6	966.6	966.6	966.6	966.6	966.6	966.6
2.5°	966.6	962.0	957.3	960.8	965.5	959.7	960.8	960.8	957.3	960.8	958.5
5°	959.7	956.2	951.5	955.0	958.5	953.8	953.8	953.8	951.5	953.8	952.7
7.5°	945.7	941.0	936.4	939.8	943.3	938.7	937.6	938.7	935.3	937.6	936.4
10°	921.3	917.8	913.1	916.6	919.0	913.1	912.0	913.1	908.5	910.8	910.8
12.5°	901.6	899.2	893.4	895.7	896.9	891.1	888.8	888.8	884.1	886.4	885.3
15°	882.9	879.4	873.7	874.9	876.0	867.9	865.5	864.4	859.7	862.0	860.9
17.5°	857.4	855.1	848.1	849.2	848.1	841.2	836.5	835.3	830.7	833.0	830.7
20°	829.5	826.0	819.0	817.9	815.6	807.5	804.0	802.8	797.0	799.3	798.1
22.5°	798.1	793.5	786.5	785.3	783.1	773.8	770.3	767.9	763.3	765.6	763.3
25°	750.6	747.1	741.2	741.2	742.4	736.6	735.4	734.2	728.4	729.6	728.4
27.5°	683.1	680.8	678.5	679.7	685.5	685.5	691.3	693.5	691.3	693.5	691.3
30°	577.4	578.5	585.5	592.5	606.4	616.9	630.8	641.3	645.9	651.8	647.1
32.5°	454.2	450.7	464.7	480.9	503.1	526.3	554.2	576.2	591.4	597.2	590.2
35°	324.1	323.0	335.7	353.2	378.8	412.5	454.2	492.6	519.3	531.0	519.3
37.5°	226.6	227.7	234.6	246.3	266.0	295.1	339.2	386.8	427.5	445.0	425.2
40°	163.8	162.7	167.3	174.2	185.9	204.4	234.6	274.2	314.9	338.1	312.5
42.5°	123.1	122.0	124.3	127.8	133.6	142.9	159.2	180.1	205.6	221.9	202.1
45°	94.1	94.1	94.1	96.4	98.8	102.3	108.0	115.0	124.3	131.3	122.0
47.5°	73.2	73.2	73.2	74.4	75.6	75.6	75.6	74.4	75.6	76.7	74.4
50°	56.9	56.9	56.9	56.9	56.9	55.7	53.4	48.8	47.6	46.5	46.5
52.5°	40.7	40.7	40.7	41.9	43.0	40.7	37.2	33.7	31.4	31.4	31.4
55°	30.2	30.2	30.2	30.2	30.2	27.9	25.5	23.2	22.0	22.0	22.0
57.5°	22.0	22.0	22.0	22.0	20.9	19.7	18.5	17.4	16.2	16.2	16.2
60°	16.2	16.2	16.2	16.2	15.1	14.0	14.0	12.8	12.8	12.8	12.8
62.5°	11.7	11.7	11.7	11.7	11.7	10.5	10.5	9.3	9.3	9.3	9.3
65°	8.2	8.2	8.2	8.2	8.2	8.2	7.0	7.0	7.0	7.0	7.0
67.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
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°	2.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
75°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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°	966.6	966.6	966.6	966.6	966.6	966.6	966.6	966.6
2.5°	958.5	964.3	964.3	959.7	956.2	962.0	963.1	960.8
5°	952.7	957.3	957.3	952.7	949.2	956.2	956.2	955.0
7.5°	936.4	942.2	941.0	937.6	934.1	939.8	942.2	939.8
10°	910.8	916.6	916.6	913.1	909.6	916.6	917.8	915.5
12.5°	886.4	892.2	894.6	891.1	889.9	895.7	898.1	895.7
15°	862.0	869.0	870.2	869.0	869.0	876.0	878.3	876.0
17.5°	833.0	840.0	842.3	841.2	842.3	849.2	852.7	850.4
20°	799.3	805.1	807.5	807.5	808.6	817.9	822.5	821.3
22.5°	763.3	770.3	773.8	774.9	776.1	785.3	790.0	787.6
25°	729.6	735.4	735.4	735.4	734.2	741.2	744.7	742.4
27.5°	689.0	690.1	686.6	678.5	672.7	675.0	677.3	671.5
30°	637.8	630.8	618.1	600.6	585.5	579.7	578.5	569.3
32.5°	572.7	553.0	526.3	496.1	469.4	455.4	449.6	439.2
35°	489.1	451.9	410.1	370.6	340.4	325.3	319.5	309.0
37.5°	382.3	335.7	291.6	258.0	238.1	225.4	221.9	216.1
40°	266.0	228.9	199.8	178.9	166.2	160.3	159.2	155.7
42.5°	175.4	154.5	139.4	129.0	123.1	119.7	119.7	117.3
45°	112.7	105.8	101.1	96.4	92.9	91.8	91.8	90.6
47.5°	73.2	74.4	74.4	73.2	70.9	69.7	70.9	69.7
50°	48.8	52.3	54.6	55.7	54.6	53.4	54.6	53.4
52.5°	33.7	37.2	40.7	41.9	40.7	39.5	39.5	39.5
55°	23.2	25.5	27.9	29.0	29.0	29.0	29.0	29.0
57.5°	17.4	18.5	19.7	20.9	22.0	20.9	22.0	20.9
60°	12.8	14.0	15.1	15.1	16.2	16.2	16.2	15.1
62.5°	9.3	10.5	10.5	11.7	11.7	11.7	11.7	11.7
65°	7.0	7.0	8.2	8.2	8.2	8.2	8.2	8.2
67.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
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	2.3
75°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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)