

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: P136840

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10830 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136840
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 ESQ6A10830 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 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1025.2 lumens
Efficiency: N/A
Efficacy: 73.2 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

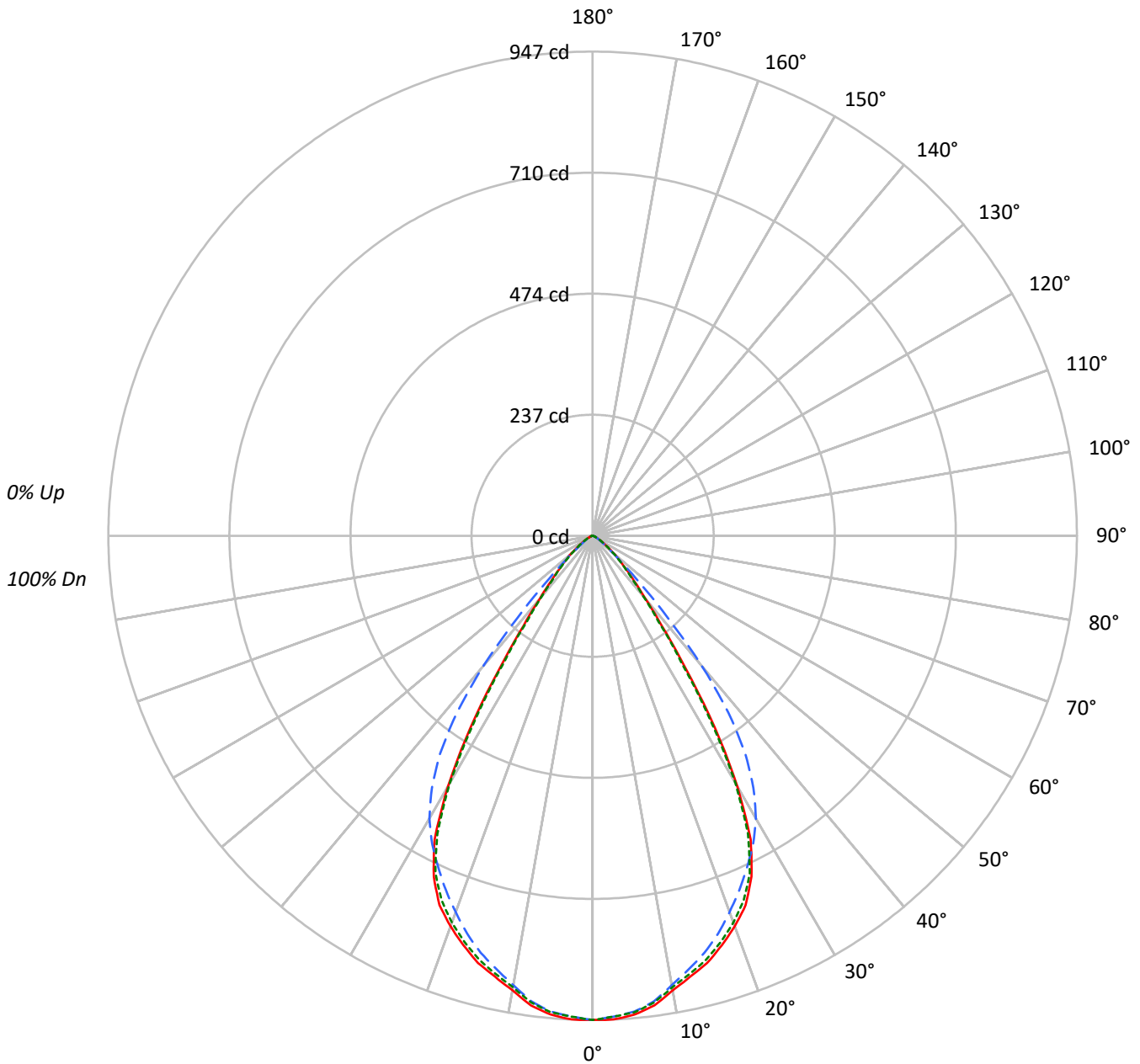
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	40774	40774	40774
5°	40636	40385	40437
10°	39457	39011	39212
15°	38557	37648	38254
20°	37237	35881	36870
25°	34932	33953	34552
30°	28120	31744	27727
35°	16688	27342	15916
40°	9021	18615	8571
45°	5614	7830	5407
50°	3738	3048	3510
55°	2222	1629	2139
60°	1378	1076	1274
65°	805	693	805
70°	566	566	428
75°	383	383	383
80°	273	273	273
85°	0	543	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.0	8.6
10°-20°	239.2	23.3
20°-30°	327.2	31.9
30°-40°	247.8	24.2
40°-50°	86.0	8.4
50°-60°	25.8	2.5
60°-70°	8.1	0.8
70°-80°	2.5	0.2
80°-90°	0.6	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°	654.4	63.8
0°-40°	902.2	88.0
0°-60°	1014.0	98.9
0°-90°	1025.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1025.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	940	937	934	936	936	89
15°	865	854	845	852	858	243
25°	735	724	715	720	727	330
35°	318	388	520	382	303	206
45°	92	98	129	97	89	75
55°	30	28	22	28	28	28
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°	947.0	947.0	947.0	947.0	947.0	947.0	947.0	947.0	947.0	947.0	947.0
2.5°	947.0	942.4	937.9	941.3	945.8	940.2	941.3	941.3	937.9	941.3	939.0
5°	940.2	936.8	932.1	935.6	939.0	934.4	934.4	934.4	932.1	934.4	933.3
7.5°	926.5	921.9	917.4	920.8	924.2	919.7	918.5	919.7	916.3	918.5	917.4
10°	902.5	899.1	894.6	898.0	900.3	894.6	893.5	894.6	890.1	892.3	892.3
12.5°	883.3	881.0	875.3	877.6	878.7	872.9	870.7	870.7	866.1	868.4	867.3
15°	865.0	861.6	855.9	857.1	858.2	850.3	848.0	846.8	842.2	844.6	843.4
17.5°	839.9	837.7	830.9	832.0	830.9	824.1	819.5	818.4	813.8	816.1	813.8
20°	812.7	809.2	802.4	801.3	799.0	791.1	787.7	786.5	780.7	783.1	781.9
22.5°	781.9	777.3	770.5	769.4	767.1	758.1	754.7	752.4	747.7	750.0	747.7
25°	735.3	731.9	726.2	726.2	727.3	721.6	720.5	719.3	713.6	714.7	713.6
27.5°	669.3	667.0	664.7	665.9	671.5	671.5	677.2	679.5	677.2	679.5	677.2
30°	565.6	566.8	573.7	580.5	594.1	604.4	618.0	628.3	632.9	638.5	634.0
32.5°	445.0	441.6	455.3	471.2	492.8	515.6	542.9	564.5	579.3	585.0	578.2
35°	317.5	316.4	329.0	346.0	371.0	404.0	445.0	482.6	508.8	520.2	508.8
37.5°	221.9	223.1	229.9	241.3	260.6	289.1	332.4	379.0	418.9	435.9	416.6
40°	160.5	159.3	163.9	170.8	182.1	200.4	229.9	268.6	308.4	331.2	306.2
42.5°	120.7	119.5	121.8	125.2	130.9	140.0	155.9	176.4	201.5	217.4	198.0
45°	92.2	92.2	92.2	94.5	96.7	100.1	105.8	112.7	121.8	128.6	119.5
47.5°	71.7	71.7	71.7	72.8	73.9	73.9	73.9	72.8	73.9	75.1	72.8
50°	55.8	55.8	55.8	55.8	55.8	54.7	52.4	47.8	46.7	45.5	45.5
52.5°	39.8	39.8	39.8	40.9	42.1	39.8	36.4	33.0	30.7	30.7	30.7
55°	29.6	29.6	29.6	29.6	29.6	27.3	25.1	22.8	21.7	21.7	21.7
57.5°	21.7	21.7	21.7	21.7	20.5	19.4	18.3	17.1	16.0	16.0	16.0
60°	16.0	16.0	16.0	16.0	14.8	13.6	13.6	12.5	12.5	12.5	12.5
62.5°	11.3	11.3	11.3	11.3	11.3	10.2	10.2	9.1	9.1	9.1	9.1
65°	7.9	7.9	7.9	7.9	7.9	7.9	6.8	6.8	6.8	6.8	6.8
67.5°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
70°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
72.5°	2.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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°	1.1	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	1.1	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	1.1	1.1	1.1	1.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
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°	947.0	947.0	947.0	947.0	947.0	947.0	947.0	947.0
2.5°	939.0	944.7	944.7	940.2	936.8	942.4	943.6	941.3
5°	933.3	937.9	937.9	933.3	929.9	936.8	936.8	935.6
7.5°	917.4	923.1	921.9	918.5	915.1	920.8	923.1	920.8
10°	892.3	898.0	898.0	894.6	891.2	898.0	899.1	896.9
12.5°	868.4	874.1	876.4	872.9	871.8	877.6	879.8	877.6
15°	844.6	851.4	852.5	851.4	851.4	858.2	860.5	858.2
17.5°	816.1	822.9	825.2	824.1	825.2	832.0	835.4	833.1
20°	783.1	788.8	791.1	791.1	792.2	801.3	805.8	804.7
22.5°	747.7	754.7	758.1	759.2	760.3	769.4	773.9	771.7
25°	714.7	720.5	720.5	720.5	719.3	726.2	729.6	727.3
27.5°	674.9	676.1	672.7	664.7	659.0	661.3	663.6	657.8
30°	624.8	618.0	605.5	588.4	573.7	568.0	566.8	557.7
32.5°	561.1	541.8	515.6	486.0	459.8	446.2	440.4	430.2
35°	479.2	442.7	401.8	363.1	333.5	318.7	313.0	302.8
37.5°	374.4	329.0	285.7	252.7	233.4	220.8	217.4	211.7
40°	260.6	224.2	195.7	175.3	162.7	157.1	155.9	152.5
42.5°	171.9	151.4	136.5	126.3	120.7	117.3	117.3	115.0
45°	110.4	103.5	99.0	94.5	91.1	89.9	89.9	88.8
47.5°	71.7	72.8	72.8	71.7	69.4	68.3	69.4	68.3
50°	47.8	51.3	53.5	54.7	53.5	52.4	53.5	52.4
52.5°	33.0	36.4	39.8	40.9	39.8	38.7	38.7	38.7
55°	22.8	25.1	27.3	28.5	28.5	28.5	28.5	28.5
57.5°	17.1	18.3	19.4	20.5	21.7	20.5	21.7	20.5
60°	12.5	13.6	14.8	14.8	16.0	16.0	16.0	14.8
62.5°	9.1	10.2	10.2	11.3	11.3	11.3	11.3	11.3
65°	6.8	6.8	7.9	7.9	7.9	7.9	7.9	7.9
67.5°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
70°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	3.4
72.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	2.3
75°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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	1.1	1.1
85°	1.1	1.1	0.0	1.1	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)