

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: P136841

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10835 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136841
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 ESQ6A10835 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: 1140.0 lumens
Efficiency: N/A
Efficacy: 81.4 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

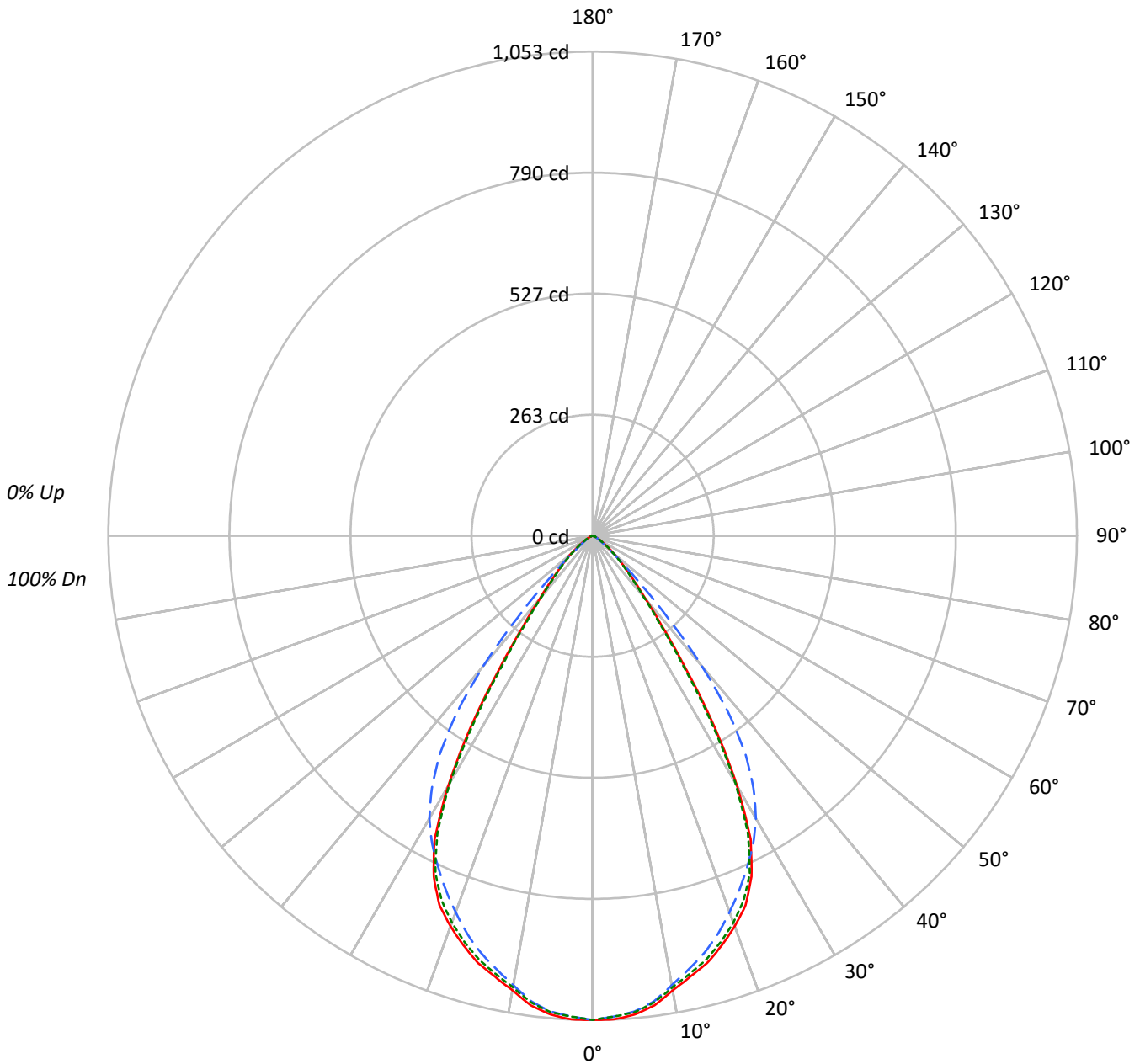
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	45333	45333	45333
5°	45182	44906	44962
10°	43877	43379	43602
15°	42872	41855	42533
20°	41402	39894	40994
25°	38841	37758	38419
30°	31272	35299	30829
35°	18559	30401	17692
40°	10027	20700	9532
45°	6241	8707	6010
50°	4153	3389	3898
55°	2470	1802	2372
60°	1524	1197	1421
65°	907	774	907
70°	642	642	478
75°	416	416	416
80°	322	322	322
85°	0	642	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.8	8.6
10°-20°	266.0	23.3
20°-30°	363.8	31.9
30°-40°	275.5	24.2
40°-50°	95.6	8.4
50°-60°	28.6	2.5
60°-70°	9.1	0.8
70°-80°	2.8	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°	727.6	63.8
0°-40°	1003.1	88.0
0°-60°	1127.4	98.9
0°-90°	1140.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1140.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1053	1053	1053	1053	1053	
5°	1045	1042	1039	1040	1040	98
15°	962	950	939	947	954	270
25°	818	806	795	801	809	366
35°	353	431	578	425	337	230
45°	102	110	143	108	99	83
55°	33	32	24	31	32	31
65°	9	9	8	9	9	10
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°	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9
2.5°	1052.9	1047.9	1042.8	1046.6	1051.7	1045.4	1046.6	1046.6	1042.8	1046.6	1044.1
5°	1045.4	1041.6	1036.5	1040.3	1044.1	1039.0	1039.0	1039.0	1036.5	1039.0	1037.8
7.5°	1030.2	1025.1	1020.0	1023.8	1027.6	1022.6	1021.3	1022.6	1018.8	1021.3	1020.0
10°	1003.6	999.8	994.7	998.5	1001.1	994.7	993.5	994.7	989.7	992.2	992.2
12.5°	982.1	979.5	973.2	975.7	977.0	970.7	968.2	968.2	963.1	965.6	964.4
15°	961.8	958.0	951.7	953.0	954.2	945.4	942.8	941.6	936.5	939.0	937.8
17.5°	934.0	931.5	923.9	925.1	923.9	916.3	911.2	909.9	904.9	907.4	904.9
20°	903.6	899.8	892.2	891.0	888.4	879.6	875.8	874.5	868.2	870.7	869.4
22.5°	869.4	864.4	856.8	855.5	853.0	842.9	839.1	836.5	831.5	834.0	831.5
25°	817.6	813.8	807.4	807.4	808.7	802.4	801.1	799.8	793.5	794.8	793.5
27.5°	744.1	741.6	739.1	740.4	746.7	746.7	753.0	755.5	753.0	755.5	753.0
30°	629.0	630.2	637.8	645.4	660.6	672.0	687.2	698.6	703.6	710.0	704.9
32.5°	494.8	491.0	506.2	523.9	548.0	573.3	603.7	627.7	644.2	650.5	642.9
35°	353.1	351.8	365.7	384.7	412.6	449.3	494.8	536.6	565.7	578.4	565.7
37.5°	246.8	248.0	255.6	268.3	289.8	321.5	369.5	421.4	465.7	484.7	463.2
40°	178.4	177.2	182.2	189.8	202.5	222.7	255.6	298.7	343.0	368.3	340.4
42.5°	134.1	132.9	135.4	139.2	145.5	155.7	173.4	196.2	224.0	241.7	220.2
45°	102.5	102.5	102.5	105.0	107.6	111.4	117.7	125.3	135.4	143.0	132.9
47.5°	79.7	79.7	79.7	81.0	82.3	82.3	82.3	81.0	82.3	83.5	81.0
50°	62.0	62.0	62.0	62.0	62.0	60.7	58.2	53.2	51.9	50.6	50.6
52.5°	44.3	44.3	44.3	45.6	46.8	44.3	40.5	36.7	34.2	34.2	34.2
55°	32.9	32.9	32.9	32.9	32.9	30.4	27.8	25.3	24.0	24.0	24.0
57.5°	24.0	24.0	24.0	24.0	22.8	21.5	20.2	19.0	17.7	17.7	17.7
60°	17.7	17.7	17.7	17.7	16.5	15.2	15.2	13.9	13.9	13.9	13.9
62.5°	12.7	12.7	12.7	12.7	12.7	11.4	11.4	10.1	10.1	10.1	10.1
65°	8.9	8.9	8.9	8.9	8.9	8.9	7.6	7.6	7.6	7.6	7.6
67.5°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
70°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
72.5°	2.5	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
75°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
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°	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9
2.5°	1044.1	1050.4	1050.4	1045.4	1041.6	1047.9	1049.1	1046.6
5°	1037.8	1042.8	1042.8	1037.8	1034.0	1041.6	1041.6	1040.3
7.5°	1020.0	1026.4	1025.1	1021.3	1017.5	1023.8	1026.4	1023.8
10°	992.2	998.5	998.5	994.7	990.9	998.5	999.8	997.3
12.5°	965.6	971.9	974.5	970.7	969.4	975.7	978.3	975.7
15°	939.0	946.6	947.9	946.6	946.6	954.2	956.8	954.2
17.5°	907.4	915.0	917.5	916.3	917.5	925.1	928.9	926.4
20°	870.7	877.0	879.6	879.6	880.8	891.0	896.0	894.7
22.5°	831.5	839.1	842.9	844.1	845.4	855.5	860.6	858.0
25°	794.8	801.1	801.1	801.1	799.8	807.4	811.2	808.7
27.5°	750.5	751.7	747.9	739.1	732.8	735.3	737.8	731.5
30°	694.8	687.2	673.3	654.3	637.8	631.5	630.2	620.1
32.5°	623.9	602.4	573.3	540.4	511.3	496.1	489.8	478.4
35°	532.8	492.3	446.7	403.7	370.8	354.4	348.0	336.6
37.5°	416.4	365.7	317.7	281.0	259.4	245.5	241.7	235.4
40°	289.8	249.3	217.7	194.9	181.0	174.6	173.4	169.6
42.5°	191.1	168.3	151.9	140.5	134.1	130.4	130.4	127.8
45°	122.8	115.2	110.1	105.0	101.2	100.0	100.0	98.7
47.5°	79.7	81.0	81.0	79.7	77.2	75.9	77.2	75.9
50°	53.2	57.0	59.5	60.7	59.5	58.2	59.5	58.2
52.5°	36.7	40.5	44.3	45.6	44.3	43.0	43.0	43.0
55°	25.3	27.8	30.4	31.6	31.6	31.6	31.6	31.6
57.5°	19.0	20.2	21.5	22.8	24.0	22.8	24.0	22.8
60°	13.9	15.2	16.5	16.5	17.7	17.7	17.7	16.5
62.5°	10.1	11.4	11.4	12.7	12.7	12.7	12.7	12.7
65°	7.6	7.6	8.9	8.9	8.9	8.9	8.9	8.9
67.5°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
70°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	3.8
72.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	2.5
75°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	1.3	1.3	0.0	1.3	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)