

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: P136842

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10840 6LSQ1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136842
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 ESQ6A10840 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 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1164.0 lumens
Efficiency: N/A
Efficacy: 83.1 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

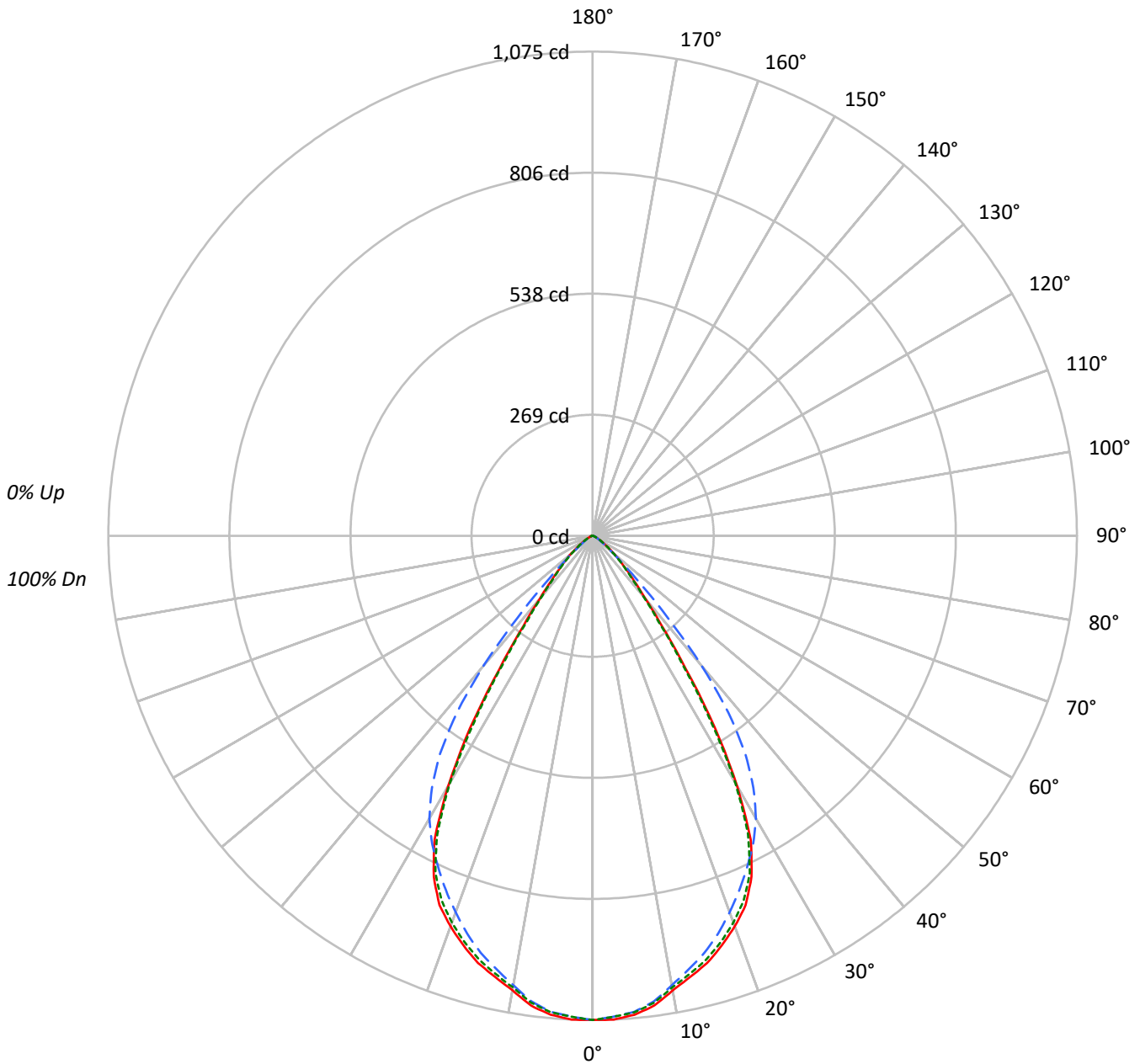
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	46289	46289	46289
5°	46133	45852	45908
10°	44800	44293	44520
15°	43777	42738	43429
20°	42272	40733	41860
25°	39659	38552	39226
30°	31928	36039	31480
35°	18948	31037	18065
40°	10241	21133	9735
45°	6375	8890	6138
50°	4240	3463	3979
55°	2522	1847	2425
60°	1559	1223	1447
65°	917	795	917
70°	655	655	491
75°	433	433	433
80°	322	322	322
85°	0	642	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.9	8.6
10°-20°	271.6	23.3
20°-30°	371.4	31.9
30°-40°	281.3	24.2
40°-50°	97.7	8.4
50°-60°	29.2	2.5
60°-70°	9.3	0.8
70°-80°	2.9	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°	742.9	63.8
0°-40°	1024.2	88.0
0°-60°	1151.2	98.9
0°-90°	1164.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1164.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1075	1075	1075	1075	1075	
5°	1067	1064	1061	1062	1062	101
15°	982	970	959	967	974	276
25°	835	822	812	818	826	374
35°	360	440	590	434	344	234
45°	105	112	146	110	101	85
55°	34	32	25	32	32	32
65°	9	9	8	9	9	10
75°	3	3	3	3	3	3
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°	1075.1	1075.1	1075.1	1075.1	1075.1	1075.1	1075.1	1075.1	1075.1	1075.1	1075.1
2.5°	1075.1	1069.9	1064.8	1068.6	1073.8	1067.4	1068.6	1068.6	1064.8	1068.6	1066.1
5°	1067.4	1063.5	1058.3	1062.2	1066.1	1060.9	1060.9	1060.9	1058.3	1060.9	1059.6
7.5°	1051.9	1046.7	1041.5	1045.4	1049.3	1044.1	1042.8	1044.1	1040.2	1042.8	1041.5
10°	1024.7	1020.8	1015.7	1019.5	1022.1	1015.7	1014.4	1015.7	1010.5	1013.1	1013.1
12.5°	1002.7	1000.2	993.7	996.3	997.6	991.1	988.5	988.5	983.4	985.9	984.7
15°	982.1	978.2	971.7	973.0	974.3	965.3	962.7	961.4	956.2	958.8	957.5
17.5°	953.6	951.1	943.3	944.6	943.3	935.6	930.4	929.1	923.9	926.5	923.9
20°	922.6	918.8	911.0	909.7	907.1	898.1	894.2	892.9	886.4	889.0	887.7
22.5°	887.7	882.6	874.8	873.5	870.9	860.6	856.7	854.1	849.0	851.6	849.0
25°	834.8	830.9	824.4	824.4	825.7	819.3	818.0	816.7	810.2	811.5	810.2
27.5°	759.8	757.2	754.6	755.9	762.4	762.4	768.9	771.4	768.9	771.4	768.9
30°	642.2	643.5	651.3	659.0	674.5	686.2	701.7	713.3	718.5	724.9	719.8
32.5°	505.3	501.4	516.9	535.0	559.5	585.4	616.4	640.9	657.7	664.2	656.4
35°	360.5	359.2	373.4	392.8	421.3	458.7	505.3	547.9	577.6	590.5	577.6
37.5°	252.0	253.3	261.0	273.9	295.9	328.2	377.3	430.3	475.5	494.9	472.9
40°	182.2	180.9	186.1	193.8	206.8	227.4	261.0	305.0	350.2	376.0	347.6
42.5°	137.0	135.7	138.3	142.1	148.6	158.9	177.0	200.3	228.7	246.8	224.8
45°	104.7	104.7	104.7	107.3	109.8	113.7	120.2	127.9	138.3	146.0	135.7
47.5°	81.4	81.4	81.4	82.7	84.0	84.0	84.0	82.7	84.0	85.3	82.7
50°	63.3	63.3	63.3	63.3	63.3	62.0	59.4	54.3	53.0	51.7	51.7
52.5°	45.2	45.2	45.2	46.5	47.8	45.2	41.4	37.5	34.9	34.9	34.9
55°	33.6	33.6	33.6	33.6	33.6	31.0	28.4	25.8	24.6	24.6	24.6
57.5°	24.6	24.6	24.6	24.6	23.3	22.0	20.7	19.4	18.1	18.1	18.1
60°	18.1	18.1	18.1	18.1	16.8	15.5	15.5	14.2	14.2	14.2	14.2
62.5°	12.9	12.9	12.9	12.9	12.9	11.6	11.6	10.3	10.3	10.3	10.3
65°	9.0	9.0	9.0	9.0	9.0	9.0	7.8	7.8	7.8	7.8	7.8
67.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
70°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
72.5°	2.6	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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°	1075.1	1075.1	1075.1	1075.1	1075.1	1075.1	1075.1	1075.1
2.5°	1066.1	1072.5	1072.5	1067.4	1063.5	1069.9	1071.2	1068.6
5°	1059.6	1064.8	1064.8	1059.6	1055.7	1063.5	1063.5	1062.2
7.5°	1041.5	1048.0	1046.7	1042.8	1038.9	1045.4	1048.0	1045.4
10°	1013.1	1019.5	1019.5	1015.7	1011.8	1019.5	1020.8	1018.3
12.5°	985.9	992.4	995.0	991.1	989.8	996.3	998.9	996.3
15°	958.8	966.6	967.9	966.6	966.6	974.3	976.9	974.3
17.5°	926.5	934.3	936.8	935.6	936.8	944.6	948.5	945.9
20°	889.0	895.5	898.1	898.1	899.4	909.7	914.9	913.6
22.5°	849.0	856.7	860.6	861.9	863.2	873.5	878.7	876.1
25°	811.5	818.0	818.0	818.0	816.7	824.4	828.3	825.7
27.5°	766.3	767.6	763.7	754.6	748.2	750.8	753.4	746.9
30°	709.4	701.7	687.5	668.1	651.3	644.8	643.5	633.2
32.5°	637.1	615.1	585.4	551.8	522.0	506.5	500.1	488.5
35°	544.0	502.7	456.1	412.2	378.6	361.8	355.4	343.7
37.5°	425.1	373.4	324.3	286.9	264.9	250.7	246.8	240.3
40°	295.9	254.6	222.3	199.0	184.8	178.3	177.0	173.2
42.5°	195.1	171.9	155.1	143.4	137.0	133.1	133.1	130.5
45°	125.3	117.6	112.4	107.3	103.4	102.1	102.1	100.8
47.5°	81.4	82.7	82.7	81.4	78.8	77.5	78.8	77.5
50°	54.3	58.1	60.7	62.0	60.7	59.4	60.7	59.4
52.5°	37.5	41.4	45.2	46.5	45.2	43.9	43.9	43.9
55°	25.8	28.4	31.0	32.3	32.3	32.3	32.3	32.3
57.5°	19.4	20.7	22.0	23.3	24.6	23.3	24.6	23.3
60°	14.2	15.5	16.8	16.8	18.1	18.1	18.1	16.8
62.5°	10.3	11.6	11.6	12.9	12.9	12.9	12.9	12.9
65°	7.8	7.8	9.0	9.0	9.0	9.0	9.0	9.0
67.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
70°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	3.9
72.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	2.6
75°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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)