

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: P136725

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10930 6LSQ1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P136725  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23378)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQ6A10D010TE ESQ6A10930 6LSQ1LI  
Description: PORTFOLIO LED SQUARE 6 INCH 60 DEGREE CUTOFF RECESSED DOWNLIGHT  
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 3000K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1124.6 lumens  
Efficiency: N/A  
Efficacy: 80.3 lumens/watt  
Spacing Criteria (0/90/45): 0.92 / 0.93 / 0.95  
Luminous Opening: Rectangular (W 0.46' x L: 0.46' x H: 0')  
CIE Type: Direct

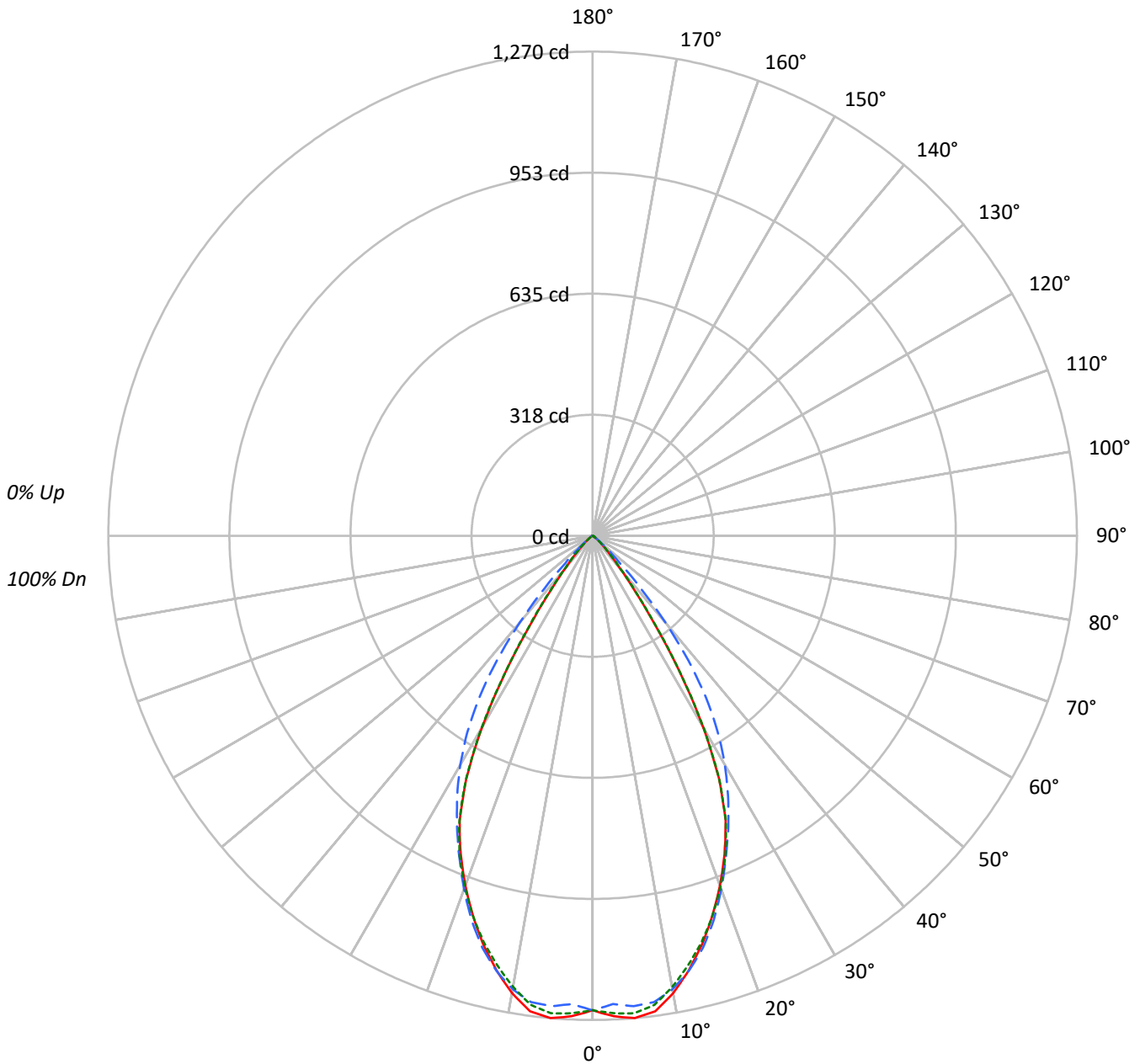
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94																			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	91	89	87																			
3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	88	85	83	81																			
4	97	90	84	80	96	89	84	80	87	82	79	85	81	78	83	80	77	75																			
5	92	84	78	74	91	83	78	74	81	77	73	80	76	72	78	75	72	70																			
6	88	79	73	69	86	78	73	69	77	72	68	75	71	68	74	70	67	66																			
7	84	74	68	64	82	74	68	64	72	67	64	71	67	63	70	66	63	62																			
8	79	70	64	60	78	69	64	60	68	63	60	67	63	59	66	62	59	58																			
9	76	66	60	56	75	66	60	56	65	59	56	64	59	56	63	59	56	54																			
10	72	62	57	53	71	62	56	53	61	56	53	60	56	52	60	55	52	51																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	63783	63783	63783
5°	65318	63708	64670
10°	63352	62837	62514
15°	58830	59328	58527
20°	53214	53754	53410
25°	46615	47559	46733
30°	34323	41056	34476
35°	17834	32396	18228
40°	7512	19873	7826
45°	3449	7377	3558
50°	1578	2200	1626
55°	795	884	795
60°	482	533	482
65°	315	376	315
70°	240	240	240
75°	119	198	119
80°	177	177	177
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.8	10.5
10°-20°	309.7	27.5
20°-30°	378.7	33.7
30°-40°	243.3	21.6
40°-50°	60.7	5.4
50°-60°	10.2	0.9
60°-70°	3.1	0.3
70°-80°	1.0	0.1
80°-90°	0.2	0.0
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°	806.1	71.7
0°-40°	1049.5	93.3
0°-60°	1120.4	99.6
0°-90°	1124.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1124.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1245	1245	1245	1245	1245	
5°	1270	1243	1239	1240	1257	120
15°	1109	1115	1118	1106	1103	309
25°	824	847	841	850	827	368
35°	285	376	518	383	291	189
45°	48	60	102	63	49	41
55°	9	10	10	10	9	9
65°	3	3	3	3	3	3
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1244.8	1244.8	1244.8	1244.8	1244.8	1244.8	1244.8	1244.8	1244.8	1244.8	1244.8
2.5°	1261.5	1230.2	1254.7	1252.6	1231.8	1235.9	1239.6	1239.0	1238.6	1229.1	1251.1
5°	1269.9	1238.0	1263.1	1260.0	1240.6	1244.8	1246.9	1247.9	1245.4	1238.6	1259.4
7.5°	1257.8	1228.1	1252.1	1248.5	1233.3	1237.0	1238.6	1241.1	1237.5	1233.8	1253.7
10°	1217.6	1192.6	1215.1	1212.4	1202.5	1206.7	1207.7	1211.9	1207.7	1207.7	1225.4
12.5°	1166.5	1147.1	1167.5	1165.4	1161.7	1166.5	1164.9	1172.2	1166.0	1168.1	1184.2
15°	1109.0	1096.5	1113.2	1112.7	1113.2	1116.8	1112.2	1117.4	1111.6	1118.4	1132.5
17.5°	1044.3	1038.5	1051.6	1052.1	1056.3	1057.4	1050.0	1056.8	1048.4	1056.3	1068.3
20°	975.9	976.9	987.4	985.8	992.1	989.0	978.5	985.3	976.9	985.8	995.2
22.5°	903.9	912.7	918.5	917.4	925.8	921.6	908.5	911.7	903.3	913.2	919.0
25°	824.5	834.4	838.6	838.6	847.4	845.8	834.4	839.6	831.8	841.2	844.3
27.5°	716.4	728.9	732.0	738.3	753.5	756.6	751.9	762.3	759.2	769.1	768.1
30°	580.1	592.7	597.3	609.8	634.4	649.0	656.8	677.2	682.4	693.9	688.2
32.5°	427.6	438.1	444.9	463.7	496.0	525.8	552.5	582.7	598.9	611.4	601.0
35°	285.1	292.9	300.3	323.7	357.7	394.7	433.4	476.7	504.3	517.9	503.9
37.5°	179.1	184.3	189.0	206.3	233.4	267.9	309.1	358.8	396.9	413.0	395.3
40°	112.3	115.4	118.0	128.4	145.1	166.1	201.0	242.8	281.9	297.1	280.4
42.5°	72.1	73.6	75.2	81.0	89.8	102.9	122.2	148.3	175.4	185.9	174.9
45°	47.6	48.0	48.6	51.7	56.4	62.7	72.6	84.5	97.7	101.8	97.1
47.5°	31.3	31.3	31.9	34.0	36.5	40.2	43.9	47.0	51.1	53.2	50.7
50°	19.8	20.4	20.9	22.5	24.1	25.6	26.6	26.6	27.6	27.6	27.2
52.5°	12.0	12.0	12.6	13.0	15.1	16.7	16.7	15.7	15.7	15.7	15.1
55°	8.9	8.9	8.9	9.4	9.9	9.9	9.9	9.9	9.9	9.9	9.4
57.5°	6.8	6.8	6.8	7.3	7.3	7.3	7.3	6.8	6.8	6.8	6.8
60°	4.7	4.7	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	4.7
62.5°	3.7	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2	3.7	3.7
65°	2.6	2.6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
67.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.6	2.1	2.1	2.1	2.1
70°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
75°	0.6	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0
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°	1244.8	1244.8	1244.8	1244.8	1244.8	1244.8	1244.8	1244.8
2.5°	1256.3	1257.8	1234.9	1239.6	1256.3	1239.6	1240.1	1253.7
5°	1261.0	1260.4	1237.0	1242.7	1252.6	1240.6	1241.1	1257.3
7.5°	1250.5	1245.8	1222.3	1229.1	1231.8	1223.4	1223.4	1241.1
10°	1218.2	1210.3	1188.4	1195.1	1190.5	1185.2	1183.7	1201.5
12.5°	1175.9	1167.0	1148.2	1154.5	1143.0	1143.0	1138.3	1154.5
15°	1123.2	1115.3	1102.2	1109.6	1092.3	1096.0	1088.7	1103.3
17.5°	1059.9	1054.7	1047.4	1056.3	1036.0	1042.2	1032.3	1044.8
20°	987.4	984.7	983.7	992.6	971.7	982.2	970.7	979.5
22.5°	912.2	912.2	917.9	929.9	907.0	918.5	904.9	910.1
25°	838.0	838.6	845.4	853.7	831.2	841.2	826.0	826.6
27.5°	759.2	754.5	761.8	760.3	732.0	737.8	721.6	718.4
30°	672.5	658.4	653.2	638.6	606.7	605.7	589.0	582.7
32.5°	577.5	550.9	534.6	504.9	464.1	454.8	439.6	432.4
35°	472.0	431.8	402.5	363.4	323.2	309.6	297.6	291.4
37.5°	356.1	310.2	276.8	239.1	210.4	199.5	189.6	185.3
40°	242.8	203.6	174.9	149.8	132.1	125.3	119.6	117.0
42.5°	149.8	124.8	108.0	92.9	83.0	79.4	76.7	75.2
45°	85.6	74.2	66.8	58.5	53.8	51.7	50.1	49.1
47.5°	47.6	44.3	41.8	38.1	35.0	33.4	32.9	32.4
50°	26.6	27.2	27.2	25.1	23.5	21.9	20.9	20.4
52.5°	15.7	16.7	17.3	15.7	13.6	12.6	12.6	12.0
55°	9.9	9.9	9.9	9.9	9.4	8.9	8.9	8.9
57.5°	6.8	6.8	7.3	7.3	7.3	6.8	6.8	6.2
60°	5.2	5.2	5.2	5.2	5.2	5.2	4.7	4.7
62.5°	4.2	4.2	4.2	4.2	4.2	3.7	3.7	3.7
65°	3.1	3.1	3.1	3.1	3.1	2.6	2.6	2.6
67.5°	2.1	2.6	2.1	2.1	2.1	2.1	2.1	2.1
70°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
75°	1.0	1.0	1.0	1.0	1.0	0.6	0.6	0.6
77.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
85°	0.0	0.0	0.0	0.0	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



Report Generated By E9808895 / USPTCWHP6082093







— 0°-180°    - - 45°-225°    - - - - 90°-270°









(END OF REPORT)