

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: P209151

Luminaire Tested: **LDSQ4B40D010 EU4B30508027 4LBSQ1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P209151
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35088)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQ4B40D010 EU4B30508027 4LBSQ1LI
Description: PORTFOLIO LD4 SERIES 4" RECESSED FIXTURE WITH A SQUARE LOW
IRIDESCENT TRIM.
MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM
WATTAGE D010TR-43.02 W DE010-42.54 W D5LT-42.539 W DMX-41.87 W DL2-41.57
W DL3-44.71 W DLE-39.33 W
Light Source: HIGH LUMEN LED 2700 K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3706.3 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

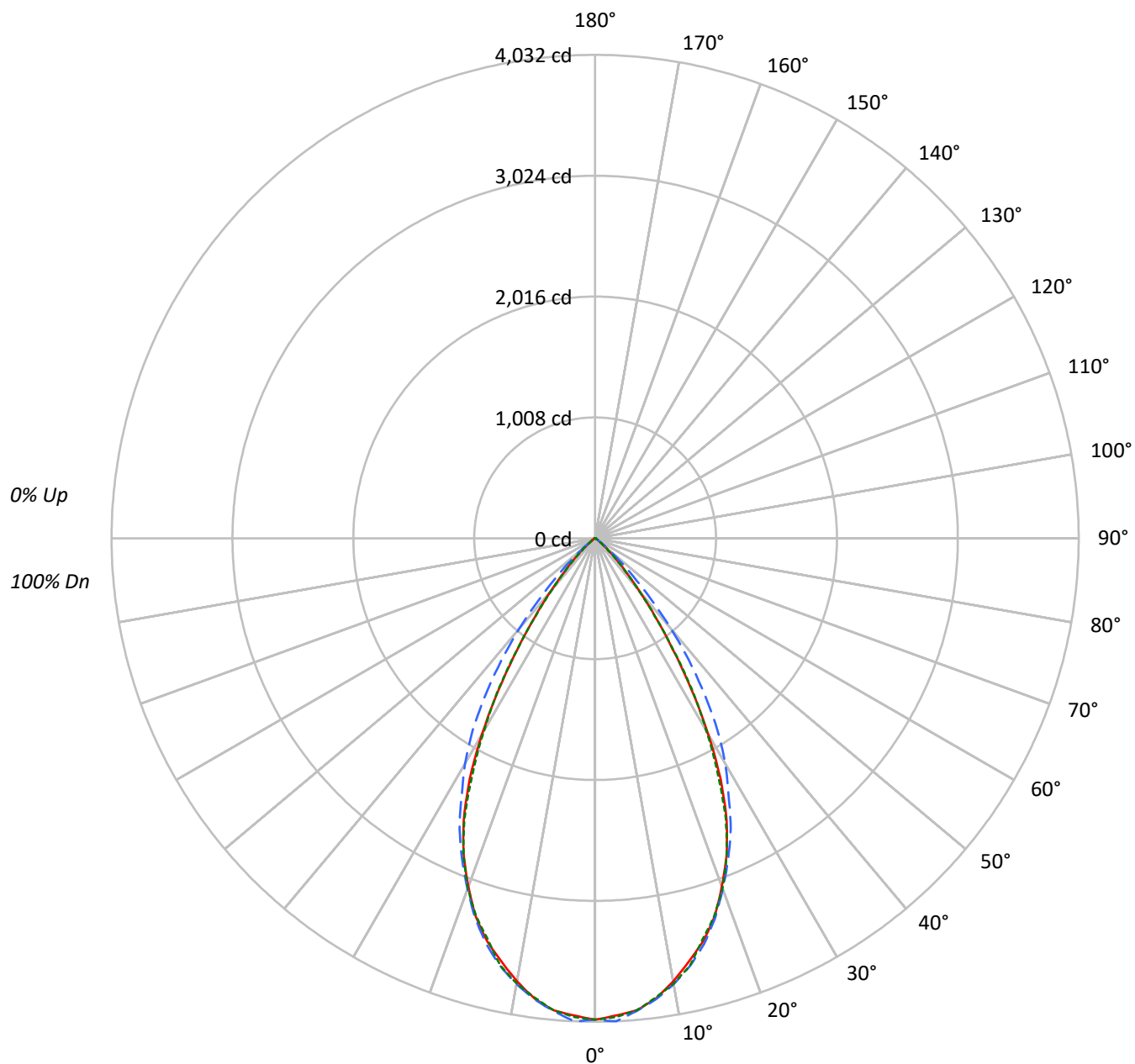
Input Watts (W): 43.02
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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						
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93						
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87						
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80						
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75						
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69						
6	87	78	72	68	86	77	71	67	76	71	67	74	70	66	73	69	66	64						
7	83	73	67	63	81	73	67	63	71	66	62	70	65	62	69	65	62	60						
8	79	69	63	59	77	68	62	58	67	62	58	66	61	58	65	61	58	56						
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53						
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50						

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	Luminaire represents a point source (luminous area is zero).		
5°	No luminance values can be calculated.		
10°			
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	372.2	10.0
10°-20°	975.5	26.3
20°-30°	1191.6	32.2
30°-40°	833.5	22.5
40°-50°	273.1	7.4
50°-60°	43.4	1.2
60°-70°	11.9	0.3
70°-80°	4.0	0.1
80°-90°	1.1	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°	2539.3	68.5
0°-40°	3372.8	91.0
0°-60°	3689.4	99.5
0°-90°	3706.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3706.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4014	4014	4014	4014	4014	
5°	3953	3955	3958	3934	3953	371
15°	3479	3493	3504	3481	3461	970
25°	2594	2633	2676	2627	2576	1165
35°	1122	1325	1594	1305	1132	716
45°	247	305	449	301	245	208
55°	36	38	43	38	33	35
65°	10	13	10	13	10	11
75°	3	3	3	3	3	4
85°	0	0	0	0	0	1
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°	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5
2.5°	3983.9	4012.0	4004.3	4022.2	4022.2	4001.8	4006.9	4014.5	4024.7	4032.4	3971.1
5°	3953.3	3978.8	3955.8	3981.3	3966.0	3943.1	3981.3	3960.9	3973.7	3958.4	3968.6
7.5°	3871.7	3912.5	3866.6	3897.2	3887.0	3874.2	3889.5	3884.4	3892.1	3879.3	3851.3
10°	3751.8	3785.0	3754.4	3797.7	3777.3	3764.6	3777.3	3790.1	3787.5	3774.8	3790.1
12.5°	3614.1	3652.3	3637.0	3662.5	3639.6	3639.6	3670.2	3662.5	3665.1	3654.9	3672.7
15°	3478.9	3507.0	3484.0	3517.2	3507.0	3478.9	3491.6	3491.6	3512.1	3504.4	3484.0
17.5°	3310.6	3333.5	3308.0	3315.7	3305.5	3300.4	3353.9	3318.2	3338.6	3323.3	3325.9
20°	3088.7	3098.9	3091.2	3111.6	3098.9	3114.2	3109.1	3104.0	3104.0	3111.6	3093.8
22.5°	2864.2	2864.2	2871.9	2877.0	2887.2	2871.9	2902.5	2877.0	2879.5	2897.4	2892.3
25°	2593.9	2586.2	2604.1	2629.6	2639.8	2627.0	2667.8	2647.4	2662.7	2675.5	2647.4
27.5°	2264.9	2264.9	2282.7	2326.1	2333.7	2349.0	2405.1	2405.1	2425.5	2407.7	2428.1
30°	1884.8	1912.9	1935.8	1991.9	2009.8	2043.0	2101.6	2129.7	2175.6	2167.9	2157.7
32.5°	1494.6	1532.9	1535.4	1594.1	1642.5	1698.6	1777.7	1844.0	1877.2	1900.1	1874.6
35°	1122.2	1145.2	1165.6	1206.4	1288.0	1362.0	1433.4	1520.1	1578.8	1594.1	1571.1
37.5°	821.3	826.4	846.8	885.0	946.2	1017.7	1104.4	1198.7	1260.0	1282.9	1257.4
40°	566.2	571.3	581.5	614.7	665.7	716.7	785.6	882.5	938.6	984.5	951.3
42.5°	380.0	385.1	395.3	420.8	448.9	497.3	550.9	612.1	665.7	686.1	668.2
45°	247.4	247.4	252.5	270.4	285.7	323.9	362.2	400.4	436.1	448.9	436.1
47.5°	145.4	147.9	153.0	165.8	183.6	198.9	227.0	252.5	262.7	272.9	267.8
50°	84.2	84.2	91.8	99.5	112.2	122.4	132.6	142.8	147.9	153.0	147.9
52.5°	45.9	48.5	51.0	53.6	58.7	68.9	76.5	76.5	79.1	81.6	79.1
55°	35.7	35.7	35.7	35.7	38.3	38.3	38.3	40.8	40.8	43.4	40.8
57.5°	25.5	25.5	25.5	28.1	28.1	28.1	25.5	25.5	25.5	25.5	25.5
60°	20.4	20.4	20.4	20.4	20.4	20.4	20.4	17.9	17.9	17.9	17.9
62.5°	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3
65°	10.2	10.2	12.8	12.8	12.8	12.8	12.8	10.2	10.2	10.2	10.2
67.5°	7.7	7.7	7.7	7.7	10.2	10.2	7.7	7.7	7.7	7.7	7.7
70°	5.1	5.1	5.1	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
72.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
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°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0
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°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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°	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5
2.5°	4014.5	3971.1	3976.2	3999.2	3986.4	3999.2	3996.7	3996.7
5°	3971.1	3958.4	3938.0	3930.3	3945.6	3978.8	3973.7	3953.3
7.5°	3889.5	3856.4	3879.3	3889.5	3876.8	3897.2	3907.4	3864.0
10°	3792.6	3779.9	3774.8	3779.9	3774.8	3795.2	3769.7	3769.7
12.5°	3654.9	3634.5	3634.5	3665.1	3647.2	3631.9	3652.3	3649.8
15°	3517.2	3476.3	3476.3	3486.5	3494.2	3484.0	3486.5	3461.0
17.5°	3313.1	3300.4	3282.5	3310.6	3318.2	3308.0	3315.7	3302.9
20°	3121.8	3121.8	3088.7	3101.4	3111.6	3119.3	3124.4	3104.0
22.5°	2877.0	2882.1	2859.1	2884.6	2892.3	2866.8	2871.9	2866.8
25°	2652.5	2650.0	2632.1	2621.9	2627.0	2616.8	2614.3	2576.0
27.5°	2405.1	2379.6	2341.4	2351.6	2308.2	2272.5	2272.5	2213.8
30°	2137.3	2094.0	2043.0	1991.9	1953.7	1912.9	1889.9	1856.8
32.5°	1823.6	1765.0	1701.2	1632.3	1589.0	1527.8	1494.6	1512.5
35°	1512.5	1425.7	1339.0	1270.2	1203.8	1168.1	1127.3	1132.4
37.5°	1211.5	1089.1	1012.6	938.6	882.5	836.6	818.7	813.6
40°	885.0	788.1	711.6	658.0	619.8	584.1	563.7	556.0
42.5°	612.1	543.3	482.0	438.7	413.2	390.2	380.0	377.5
45°	397.9	357.1	316.3	285.7	265.3	250.0	247.4	244.8
47.5°	250.0	229.5	204.0	181.1	163.2	153.0	145.4	145.4
50°	142.8	135.2	122.4	109.7	99.5	94.4	86.7	84.2
52.5°	76.5	76.5	71.4	61.2	53.6	48.5	48.5	45.9
55°	40.8	40.8	38.3	38.3	35.7	35.7	35.7	33.2
57.5°	25.5	25.5	28.1	28.1	25.5	25.5	25.5	25.5
60°	17.9	20.4	20.4	20.4	20.4	20.4	20.4	20.4
62.5°	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3
65°	10.2	12.8	12.8	12.8	12.8	10.2	10.2	10.2
67.5°	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
70°	7.7	7.7	7.7	7.7	7.7	5.1	5.1	5.1
72.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
75°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
77.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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)