

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: P209221

Luminaire Tested: **LDSQ4B15D010 EU4B10209030 4LBCSSQ1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P209221
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35089)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQ4B15D010 EU4B10209030 4LBCSSQ1MMS
Description: PORTFOLIO LD4 SERIES 4" RECESSED FIXTURE WITH A SQUARE SHALLOW CAST METALLIC SILVER TRIM
MEDIUM DISTRIBUTION WITH MATTE METALLIC SILVER TRIM
WATTAGE D010TR-14.39 W DE010-14.29 W D5LT-14.34 W DMX-14.46 W DL2-15.8 W DL3-15.28 W DLE-15.432 W
Light Source: HIGH LUMEN LED 3000 K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1253.5 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.29
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

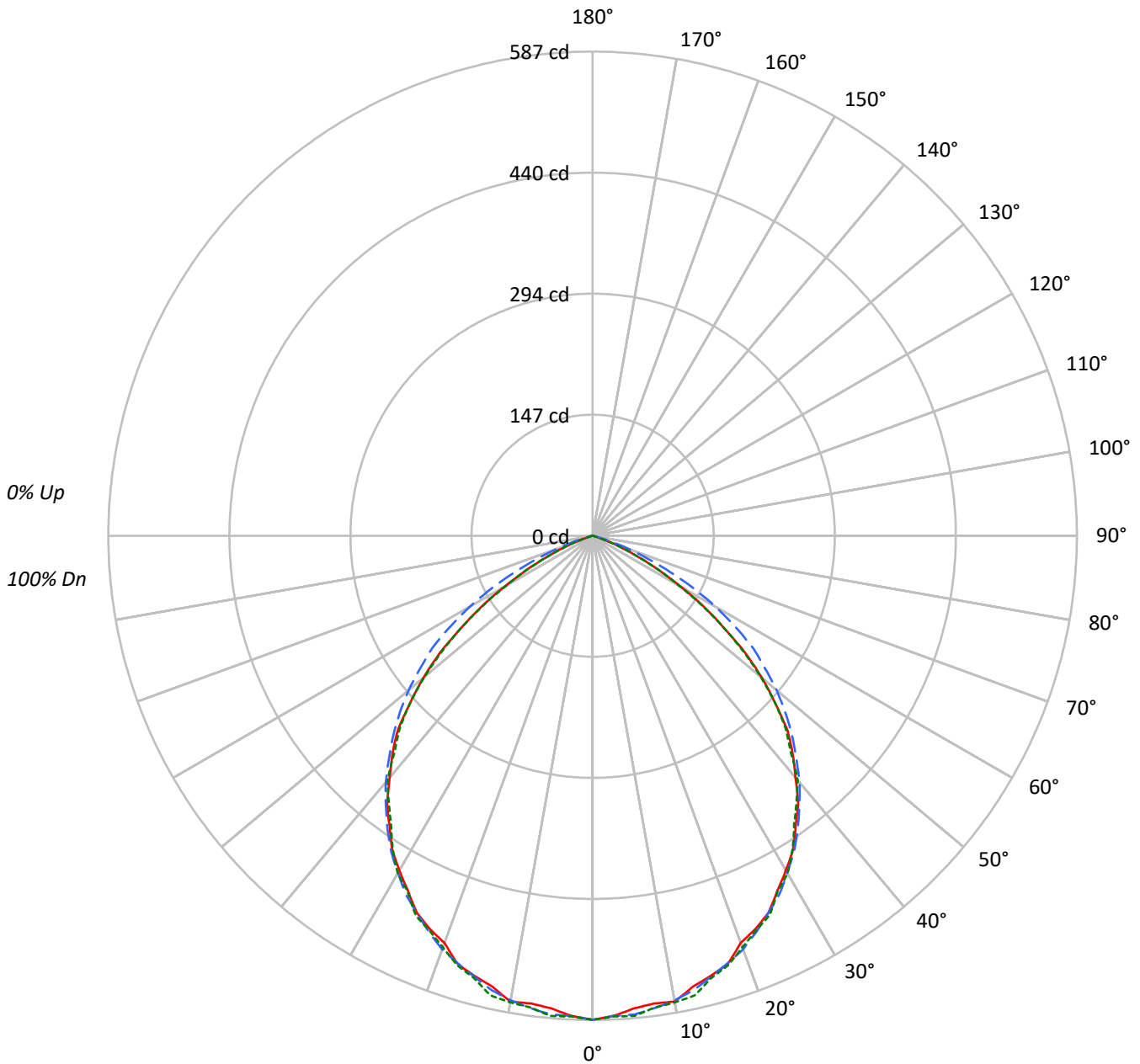
Input Watts (W): 14.39
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89																			
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46																			
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41																			
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37																			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34																			
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	31																			

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°	55.4	4.4
10°-20°	156.7	12.5
20°-30°	232.6	18.6
30°-40°	269.5	21.5
40°-50°	258.4	20.6
50°-60°	190.0	15.2
60°-70°	82.0	6.5
70°-80°	8.8	0.7
80°-90°	0.1	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°	444.7	35.5
0°-40°	714.1	57.0
0°-60°	1162.5	92.7
0°-90°	1253.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1253.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	587	587	587	587	587	
5°	575	581	583	583	584	55
15°	553	556	553	554	555	156
25°	504	503	504	505	508	231
35°	429	432	433	433	426	268
45°	334	335	342	337	331	254
55°	193	213	238	212	194	174
65°	63	79	103	78	62	65
75°	2	2	9	2	2	5
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	586.8	586.8	586.8	586.8	586.8	586.8	586.8	586.8	586.8	586.8	586.8
2.5°	582.6	589.3	590.1	585.9	584.3	581.8	587.6	583.4	585.1	583.4	582.6
5°	575.1	582.6	583.4	583.4	581.8	580.9	583.4	582.6	581.8	580.1	582.6
7.5°	571.8	575.9	580.1	575.1	577.6	576.8	582.6	580.1	579.3	579.3	577.6
10°	573.4	572.6	575.9	570.9	572.6	570.9	575.9	575.9	574.3	572.6	571.8
12.5°	560.1	566.8	566.8	565.9	564.3	561.8	566.8	570.1	565.1	565.1	564.3
15°	552.6	554.3	555.1	555.1	554.3	555.9	558.4	555.1	555.9	551.8	553.4
17.5°	544.3	540.9	543.4	541.8	542.6	544.3	547.6	547.6	542.6	541.8	543.4
20°	525.1	535.1	535.9	530.9	531.8	531.8	537.6	532.6	535.9	531.8	533.4
22.5°	515.9	522.6	523.4	516.8	520.9	515.9	521.8	514.3	522.6	516.8	519.3
25°	504.3	503.4	505.9	502.6	503.4	503.4	507.6	504.3	506.8	503.4	504.3
27.5°	485.1	491.8	490.9	487.6	489.3	488.4	496.8	487.6	492.6	488.4	490.1
30°	468.4	474.3	472.6	469.3	469.3	466.8	475.9	473.4	472.6	472.6	471.8
32.5°	451.8	452.6	450.9	451.8	452.6	449.3	456.8	453.4	452.6	453.4	454.3
35°	429.2	429.2	430.9	428.4	431.8	431.8	438.4	434.3	433.4	430.9	433.4
37.5°	409.2	406.7	407.6	407.6	409.2	410.9	414.2	412.6	412.6	410.1	411.7
40°	382.6	380.9	383.4	383.4	385.9	385.9	389.2	387.6	390.1	390.1	390.1
42.5°	359.2	359.2	357.6	360.1	360.9	360.1	365.9	365.1	365.9	364.2	365.1
45°	334.2	334.2	332.6	331.7	335.9	335.1	341.7	339.2	342.6	340.9	341.7
47.5°	300.1	304.2	301.7	304.2	309.2	310.1	314.2	312.6	315.9	313.4	316.7
50°	267.6	267.6	270.1	273.4	278.4	279.2	284.2	287.6	289.2	290.1	290.9
52.5°	233.4	232.5	235.0	239.2	243.4	246.7	251.7	256.7	260.1	265.1	262.6
55°	193.4	195.0	197.5	202.5	209.2	213.4	217.5	224.2	230.0	232.5	237.5
57.5°	159.2	157.5	159.2	165.9	173.4	176.7	182.5	189.2	197.5	202.5	204.2
60°	123.4	124.2	125.9	131.7	137.5	142.5	145.0	155.9	163.4	168.4	171.7
62.5°	90.9	92.5	94.2	99.2	105.0	109.2	113.4	122.5	129.2	134.2	137.5
65°	63.3	64.2	66.7	69.2	75.0	79.2	82.5	90.0	96.7	100.9	103.4
67.5°	39.2	40.0	41.7	45.0	49.2	52.5	55.8	60.8	66.7	70.8	71.7
70°	20.0	20.8	21.7	24.2	27.5	29.2	31.7	35.8	40.0	43.3	45.0
72.5°	6.7	6.7	7.5	9.2	10.8	12.5	13.3	17.5	20.8	22.5	23.3
75°	1.7	1.7	1.7	1.7	1.7	2.5	2.5	5.0	6.7	8.3	9.2
77.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.7	1.7
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
82.5°	0.0	0.0	0.0	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	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	586.8	586.8	586.8	586.8	586.8	586.8	586.8	586.8	586.8	586.8
2.5°	586.8	585.1	584.3	585.1	585.1	584.3	586.8	590.1	594.3	583.4
5°	585.9	584.3	585.9	580.9	583.4	581.8	585.1	584.3	587.6	584.3
7.5°	583.4	580.1	580.9	578.4	581.8	577.6	580.1	585.1	581.8	576.8
10°	575.1	573.4	579.3	570.9	569.3	572.6	579.3	574.3	572.6	574.3
12.5°	566.8	566.8	569.3	562.6	563.4	565.1	568.4	565.1	566.8	570.9
15°	557.6	555.9	560.1	555.1	554.3	552.6	555.9	555.9	557.6	555.1
17.5°	546.8	544.3	544.3	542.6	541.8	545.9	547.6	548.4	549.3	545.9
20°	533.4	532.6	535.1	532.6	533.4	534.3	534.3	532.6	540.1	530.9
22.5°	519.3	521.8	518.4	516.8	518.4	520.1	520.1	520.9	519.3	517.6
25°	505.1	506.8	507.6	502.6	505.1	502.6	508.4	509.3	505.9	507.6
27.5°	492.6	490.1	489.3	485.9	487.6	486.8	487.6	487.6	492.6	485.9
30°	473.4	470.9	471.8	469.3	470.1	469.3	470.1	470.1	473.4	472.6
32.5°	455.1	452.6	453.4	450.9	450.9	451.8	450.1	450.1	452.6	450.9
35°	437.6	431.8	432.6	431.8	432.6	429.2	429.2	428.4	430.1	425.9
37.5°	412.6	410.1	409.2	408.4	409.2	407.6	409.2	406.7	409.2	405.9
40°	390.1	388.4	389.2	384.2	384.2	385.1	383.4	382.6	383.4	386.7
42.5°	367.6	364.2	362.6	360.9	361.7	359.2	358.4	356.7	358.4	355.1
45°	340.9	340.9	340.1	335.9	336.7	336.7	333.4	330.1	330.9	330.9
47.5°	316.7	315.1	314.2	310.1	309.2	308.4	305.1	302.6	302.6	300.1
50°	290.1	288.4	285.9	281.7	280.1	275.1	272.6	269.2	265.9	265.9
52.5°	265.1	259.2	255.9	249.2	246.7	244.2	237.5	235.0	232.5	230.0
55°	235.0	230.0	223.4	215.9	212.5	208.4	201.7	196.7	193.4	194.2
57.5°	205.9	197.5	190.9	180.9	176.7	174.2	167.5	160.9	157.5	157.5
60°	170.0	163.4	155.0	145.9	142.5	138.4	130.0	125.9	123.4	120.9
62.5°	135.9	130.9	123.4	111.7	109.2	105.0	99.2	94.2	91.7	91.7
65°	101.7	96.7	90.0	81.7	78.3	75.0	70.0	65.0	62.5	61.7
67.5°	71.7	65.8	60.0	53.3	50.8	49.2	44.2	40.8	39.2	38.3
70°	43.3	40.0	35.8	30.8	28.3	26.7	23.3	20.8	20.0	19.2
72.5°	22.5	20.0	16.7	13.3	11.7	10.0	8.3	6.7	5.8	5.8
75°	8.3	6.7	4.2	2.5	1.7	1.7	1.7	1.7	1.7	1.7
77.5°	1.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
82.5°	0.0	0.0	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	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
90°	0.0	0.0	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)