

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: METALUX

Report Number: 113P100

Luminaire Tested: **BI-140**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 113P100
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BI-140
Description: Wall Bracket with Injection Molded Acrylic Lens
Light Source: F40/CW, 3150 Lumens, 40 Watts
Ballast/Driver: -

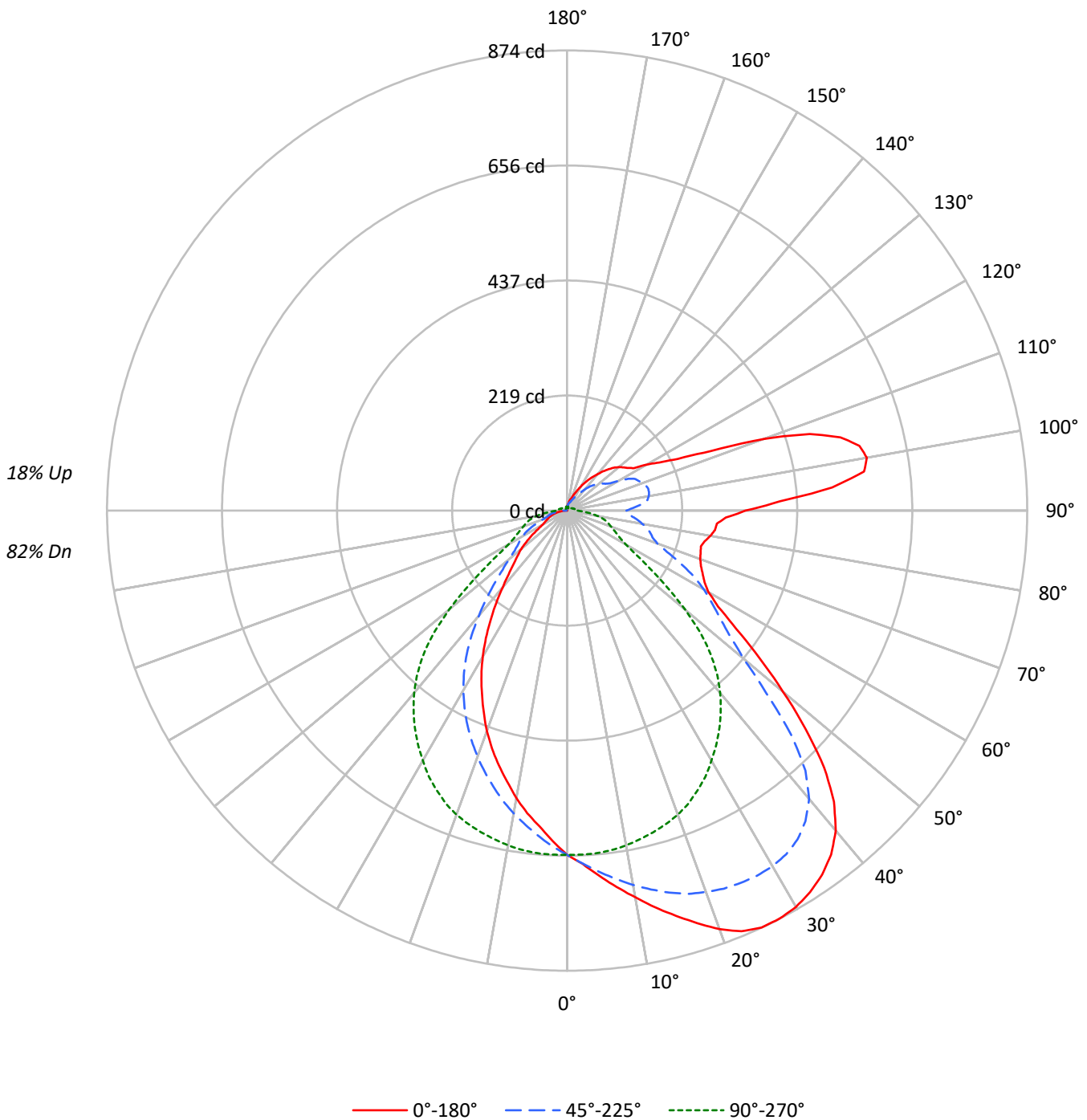
Summary

Lumens per Lamp: 3150 (1 lamp)
Luminaire Lumens: 2126.2 lumens
Efficiency: 67.5%
Efficacy: 43.2 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.24 / 1.35
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4.05' x H: 0.22')
CIE Type: Semi-Direct

Input Watts (W): 49.2
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	0
RCR																		
0	77	77	77	77	74	74	74	74	68	68	68	63	63	63	57	57	57	55
1	70	67	64	61	67	64	61	59	59	57	55	54	53	51	50	49	47	45
2	64	59	54	50	61	56	52	49	52	49	46	48	45	43	44	42	40	38
3	59	52	47	42	56	50	45	41	46	42	39	43	39	37	39	37	35	33
4	54	46	41	36	51	45	39	35	41	37	34	38	35	32	35	33	30	28
5	50	42	36	31	48	40	35	31	37	33	29	35	31	28	32	29	26	25
6	46	37	32	28	44	36	31	27	34	29	26	31	28	25	29	26	23	22
7	43	34	28	24	41	33	28	24	31	26	23	29	25	22	27	24	21	20
8	40	31	26	22	38	30	25	21	28	24	21	26	23	20	25	21	19	18
9	37	29	23	20	36	28	23	19	26	22	19	24	21	18	23	20	17	16
10	35	26	21	18	33	26	21	18	24	20	17	23	19	16	21	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	4167	4167	4167
5°	4433	3996	3833
10°	4782	3825	3554
15°	5181	3658	3259
20°	5629	3501	2964
25°	5994	3312	2629
30°	6205	3097	2286
35°	6331	2869	1900
40°	6319	2613	1516
45°	5908	2279	1229
50°	4991	1780	1062
55°	4048	1221	836
60°	3608	856	630
65°	3839	739	587
70°	4364	674	576
75°	5387	637	574
80°	7762	539	514
85°	12907	388	375



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	62.3	2.9	2.0	0°	654	654	654	654	654	
10°-20°	182.2	8.6	5.8	5°	696	688	653	621	602	68
20°-30°	281.5	13.2	8.9	15°	796	751	632	542	501	227
30°-40°	334.4	15.7	10.6	25°	874	780	586	449	383	402
40°-50°	307.6	14.5	9.8	35°	844	763	504	332	253	527
50°-60°	213.2	10.0	6.8	45°	691	602	386	194	144	524
60°-70°	143.6	6.8	4.6	55°	392	353	192	114	81	360
70°-80°	114.0	5.4	3.6	65°	284	237	104	75	43	283
80°-90°	94.3	4.4	3.0	75°	263	164	77	36	28	283
90°-100°	116.2	5.5	3.7	85°	285	123	37	13	8	234
100°-110°	124.1	5.8	3.9	90°	338	113	20	3	0	189
110°-120°	67.8	3.2	2.2	95°	505	144	18	3	0	426
120°-130°	37.5	1.8	1.2	105°	537	160	14	2	0	550
130°-140°	24.3	1.1	0.8	115°	232	142	10	2	0	252
140°-150°	13.2	0.6	0.4	125°	141	89	7	1	0	130
150°-160°	6.1	0.3	0.2	135°	111	67	5	1	0	86
160°-170°	3.0	0.1	0.1	145°	72	39	4	1	0	46
170°-180°	0.8	0.0	0.0	155°	38	22	5	2	1	19
0°-30°	526.0	24.7	16.7	165°	21	15	8	7	6	6
0°-40°	860.4	40.5	27.3	175°	11	9	6	6	7	1
0°-60°	1381.1	65.0	43.8	180°	5	5	5	5	5	
0°-90°	1733.1	81.5	55.0							
90°-120°	308.1	14.5	9.8							
90°-150°	383.2	18.0	12.2							
90°-180°	393.0	18.5	12.5							
0°-180°	2126.2	100.0	67.5							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	653.8	653.8	653.8	653.8	653.8	653.8	653.8	653.8	653.8
2.5°	671.7	674.9	670.8	663.7	654.0	645.9	638.5	632.1	628.1
5°	696.1	697.0	688.2	672.7	653.2	635.8	620.8	610.4	601.8
7.5°	721.0	720.2	705.4	680.6	650.2	623.9	602.3	588.7	579.8
10°	745.9	742.6	722.2	686.9	645.7	610.9	584.1	566.1	554.3
12.5°	771.8	765.9	737.1	692.3	639.4	597.2	564.1	540.7	527.1
15°	796.5	787.5	751.3	695.4	632.3	582.6	542.4	515.8	501.0
17.5°	821.5	809.0	763.4	697.2	624.2	567.4	520.5	489.8	474.0
20°	846.2	827.9	770.9	695.7	614.8	551.0	497.4	462.9	445.5
22.5°	864.8	841.9	777.3	690.5	602.0	532.5	473.4	434.6	414.2
25°	873.7	849.7	780.2	683.6	586.3	511.5	448.6	404.2	383.2
27.5°	873.9	849.7	781.6	674.5	569.2	488.2	422.3	375.5	352.6
30°	869.3	844.3	780.0	664.7	548.3	463.1	394.1	345.8	320.3
32.5°	859.0	835.1	774.1	652.6	527.2	435.7	364.4	314.8	287.0
35°	844.3	820.8	762.8	638.9	504.3	406.4	332.4	279.4	253.4
37.5°	823.5	800.1	743.5	622.1	479.1	375.0	297.5	245.8	221.1
40°	793.8	767.8	715.0	600.0	452.4	339.4	261.0	214.1	190.4
42.5°	749.8	720.7	669.7	572.3	421.2	301.5	226.7	186.1	164.4
45°	690.8	658.9	601.8	534.1	385.5	266.0	194.0	163.8	143.7
47.5°	614.4	590.3	512.9	479.8	342.9	234.1	166.0	146.5	128.1
50°	535.7	530.0	437.0	420.4	291.8	207.4	143.7	133.6	114.0
52.5°	460.5	473.1	387.6	365.3	240.4	183.6	126.0	121.1	97.6
55°	392.3	414.3	353.3	310.7	192.3	157.7	114.5	106.1	81.0
57.5°	340.0	359.9	325.2	258.3	153.9	131.1	106.1	89.8	65.3
60°	309.5	316.7	299.8	215.8	128.2	108.3	97.6	74.3	54.0
62.5°	294.0	287.8	271.5	183.5	113.6	92.0	87.6	61.0	47.4
65°	284.0	270.0	237.3	160.1	104.1	81.6	75.3	50.9	43.4
67.5°	275.0	257.9	205.3	145.2	95.6	74.5	61.4	43.9	39.0
70°	268.9	247.0	182.1	133.1	88.4	67.9	49.6	38.2	35.5
72.5°	265.8	239.8	170.0	125.1	82.5	61.7	41.0	33.0	31.5
75°	262.8	235.8	163.7	119.3	76.6	54.7	36.3	29.0	28.0
77.5°	267.8	233.8	155.5	114.0	68.1	46.4	32.3	24.9	22.9
80°	276.2	233.8	145.0	106.6	58.4	39.3	26.8	20.5	18.3
82.5°	283.2	237.3	134.8	96.2	47.6	30.9	20.5	15.5	12.6
85°	285.4	241.6	123.2	84.3	37.1	23.3	13.4	10.7	8.3
87.5°	301.8	249.2	112.5	71.6	25.9	16.1	8.0	5.4	3.3
90°	338.4	276.3	112.6	62.3	19.6	9.4	2.9	0.5	0.0
92.5°	404.2	331.5	126.3	61.2	19.2	8.1	2.3	0.2	0.0
95°	505.3	393.5	143.8	58.8	18.4	7.8	2.7	0.2	0.0
97.5°	568.9	436.5	153.6	56.6	16.8	7.4	2.4	0.2	0.0
100°	578.0	470.1	157.4	54.3	15.6	7.4	1.7	0.4	0.0
102.5°	568.5	489.5	159.2	52.0	14.1	6.9	2.1	0.2	0.0
105°	537.4	472.5	159.6	50.0	13.5	6.8	1.8	0.6	0.0
107.5°	483.5	421.0	157.2	46.8	12.1	6.3	1.4	0.2	0.1
110°	398.7	349.4	152.9	43.6	11.9	6.1	1.9	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	294.0	264.6	146.9	40.0	11.2	5.8	1.7	0.0	0.0
115°	231.8	206.4	142.4	36.2	10.3	5.3	1.5	0.2	0.0
117.5°	197.4	179.1	130.7	32.7	9.7	5.1	1.2	0.8	0.0
120°	175.1	157.3	113.0	29.6	8.8	5.8	1.4	0.0	0.0
122.5°	150.0	138.5	96.1	26.8	8.8	5.0	0.7	0.3	0.0
125°	140.8	130.5	88.7	24.6	7.4	4.7	1.1	0.3	0.0
127.5°	134.6	123.2	84.3	22.0	7.1	3.9	0.6	0.5	0.1
130°	128.3	115.9	78.6	20.4	6.3	3.6	1.0	0.5	0.8
132.5°	120.6	107.5	73.3	19.6	5.6	3.6	1.0	0.6	1.0
135°	110.9	98.4	67.2	19.2	5.4	3.1	0.7	0.6	0.2
137.5°	101.1	88.6	60.1	19.6	4.8	3.1	1.3	0.7	0.1
140°	90.3	79.6	52.4	19.6	4.6	3.1	1.0	0.5	0.1
142.5°	81.3	71.2	45.4	19.4	4.3	3.0	1.1	0.7	0.7
145°	72.0	62.2	39.2	19.2	4.0	2.9	1.2	0.7	0.4
147.5°	62.9	54.0	34.6	17.8	4.5	2.5	1.1	0.7	0.4
150°	54.0	47.0	30.4	16.9	4.3	2.6	1.0	0.8	0.7
152.5°	45.8	40.0	26.1	14.9	4.5	3.3	1.5	0.7	0.7
155°	38.3	33.7	22.5	12.6	4.7	3.1	2.4	1.3	0.8
157.5°	32.7	29.0	20.0	11.8	5.5	4.1	2.7	2.5	2.1
160°	25.9	24.8	17.8	10.3	6.1	5.3	3.8	3.0	4.1
162.5°	22.6	21.7	16.7	10.6	6.9	6.8	5.3	5.9	5.6
165°	20.8	19.5	15.0	10.1	7.6	7.8	7.2	6.7	6.3
167.5°	17.9	16.3	13.3	10.4	7.6	8.7	7.6	6.9	7.0
170°	14.1	13.5	13.2	9.4	7.4	8.0	7.4	7.6	7.4
172.5°	11.2	11.3	10.3	8.4	6.7	7.8	7.6	7.7	7.8
175°	10.8	10.2	8.7	7.1	6.2	6.3	6.4	6.5	7.1
177.5°	7.7	6.7	5.7	5.9	5.9	5.4	4.3	4.6	4.8
180°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7

(END OF REPORT)