

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: P294483

Luminaire Tested: **BMK-12-WCL-UNV-L740-CD-U**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P294483
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1903-198-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-12-WCL-UNV-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE CLEAR LENS
Light Source: (528) 70 CRI 4000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13410.0 lumens
Efficiency: N/A
Efficacy: 180.5 lumens/watt
Spacing Criteria (0/90/45): 1.8 / 1.79 / 1.79
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

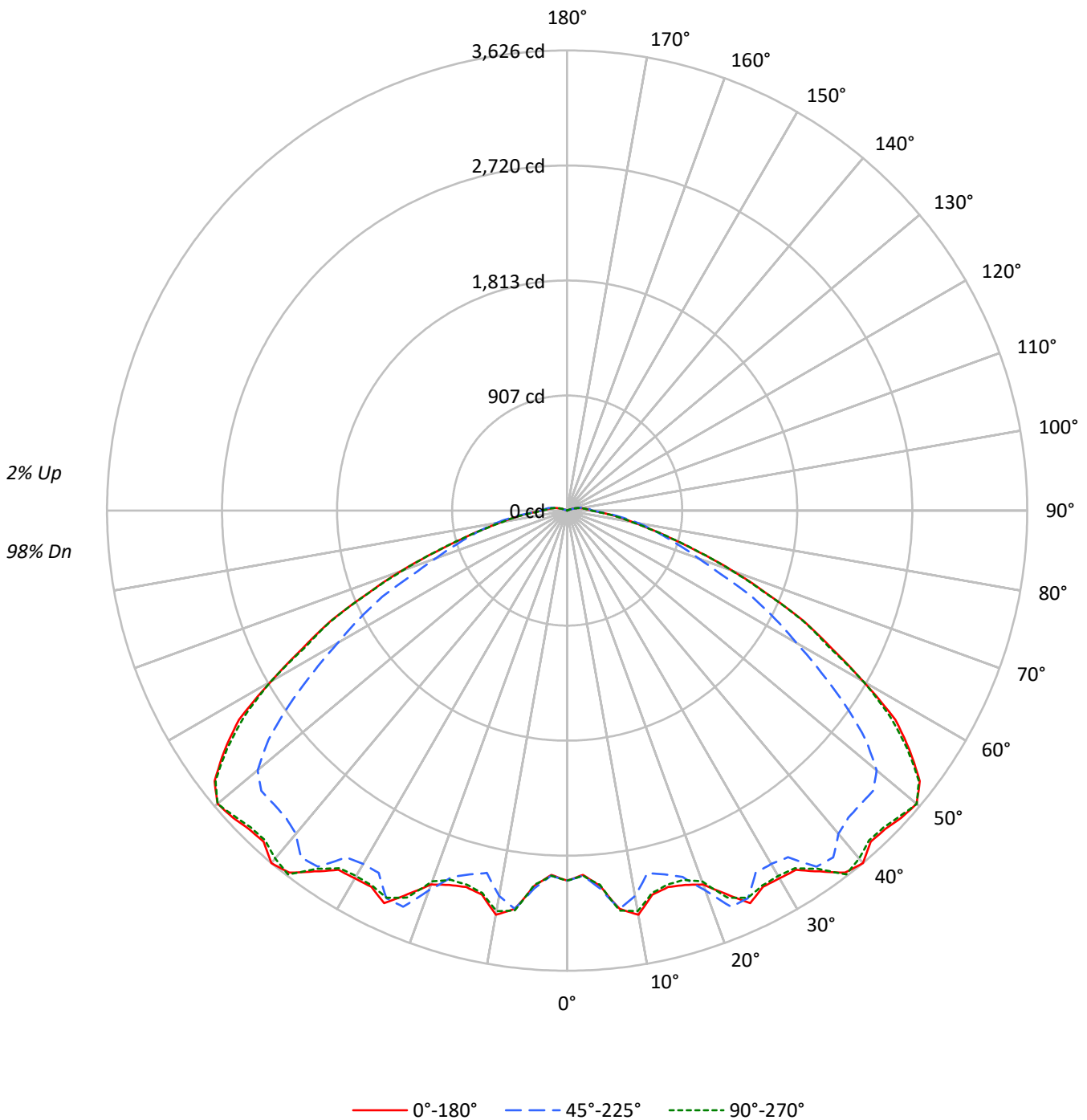
Input Watts (W): 74.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	108	102	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83	80
2	97	88	81	75	94	86	80	74	82	77	72	79	74	70	75	71	68	66
3	88	77	68	61	85	75	67	60	72	65	59	68	63	58	66	61	56	54
4	80	67	58	51	77	66	57	50	63	55	49	60	54	48	58	52	47	45
5	73	59	50	43	71	58	49	42	56	48	42	53	46	41	51	45	40	38
6	67	53	43	37	65	52	43	36	50	42	36	48	41	35	46	40	35	33
7	62	47	38	32	60	46	38	32	45	37	31	43	36	31	41	35	30	28
8	57	43	34	28	55	42	34	28	41	33	27	39	32	27	38	31	27	25
9	53	39	30	25	51	38	30	24	37	29	24	36	29	24	35	28	24	22
10	50	36	27	22	48	35	27	22	34	27	22	33	26	21	32	26	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22479	22479	22479
5°	22726	22891	22669
10°	24792	23648	24570
15°	23755	22957	23597
20°	24647	25037	24437
25°	27501	27155	27129
30°	27860	26778	27690
35°	30147	29755	29914
40°	33166	30415	32734
45°	34551	31852	34362
50°	37742	33423	37753
55°	37848	30757	37552
60°	34442	26675	34469
65°	29823	23335	29746
70°	23588	18703	23352
75°	17571	16487	17682
80°	13933	15098	13618
85°	12215	12895	11893



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	292.9	2.2
10°-20°	861.5	6.4
20°-30°	1506.4	11.2
30°-40°	2145.1	16.0
40°-50°	2655.0	19.8
50°-60°	2641.1	19.7
60°-70°	1790.1	13.3
70°-80°	887.7	6.6
80°-90°	370.3	2.8
90°-100°	174.3	1.3
100°-110°	75.7	0.6
110°-120°	9.8	0.1
120°-130°	0.2	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°	2660.7	19.8
0°-40°	4805.8	35.8
0°-60°	10101.9	75.3
0°-90°	13150.0	98.1
90°-120°	259.8	1.9
90°-150°	260.0	1.9
90°-180°	260.0	1.9
0°-180°	13410.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2916	2916	2916	2916	2916	
5°	2967	2956	2989	2968	2960	295
15°	3072	2961	2968	2966	3051	881
25°	3413	3209	3370	3196	3367	1538
35°	3471	3482	3426	3490	3444	2189
45°	3547	3439	3270	3426	3528	2764
55°	3296	2992	2678	2970	3270	2910
65°	2053	1785	1607	1792	2048	2011
75°	853	798	800	807	858	940
85°	326	318	345	317	318	308
90°	196	208	199	206	192	111
95°	149	160	166	158	148	115
105°	72	69	67	70	72	76
115°	5	6	8	6	5	10
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P294483

CATALOG NUMBER: BMK-12-WCL-UNV-L740-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2915.9	2915.9	2915.9	2915.9	2915.9
2.5°	2872.9	2884.7	2880.4	2876.1	2880.4
5°	2967.4	2955.6	2988.9	2968.5	2959.9
7.5°	3166.1	3137.1	3163.9	3138.2	3179.0
10°	3233.8	3185.4	3084.5	3173.6	3204.8
12.5°	3099.5	3052.3	2924.4	3060.8	3086.6
15°	3071.6	2961.0	2968.5	2966.3	3051.2
17.5°	3092.0	2959.9	3026.5	2962.0	3051.2
20°	3134.9	3075.9	3184.4	3078.0	3108.1
22.5°	3270.3	3218.7	3378.7	3216.6	3300.3
25°	3413.1	3209.1	3370.1	3196.2	3366.9
27.5°	3342.2	3228.4	3217.6	3215.5	3330.4
30°	3345.4	3263.8	3215.5	3272.4	3325.0
32.5°	3356.2	3329.3	3239.1	3341.2	3341.2
35°	3471.1	3481.8	3426.0	3490.4	3444.3
37.5°	3596.8	3480.8	3444.3	3484.0	3613.9
40°	3625.8	3421.7	3325.0	3417.4	3578.5
42.5°	3539.8	3448.5	3281.0	3437.8	3522.7
45°	3547.4	3438.9	3270.3	3426.0	3528.0
47.5°	3577.4	3504.4	3269.2	3493.7	3561.3
50°	3594.6	3374.4	3183.3	3373.4	3595.7
52.5°	3502.2	3213.3	2965.3	3209.1	3491.5
55°	3296.0	2992.1	2678.5	2969.6	3270.3
57.5°	3066.2	2737.6	2373.5	2719.3	3016.8
60°	2695.7	2418.6	2087.8	2414.3	2697.8
62.5°	2347.7	2155.5	1846.2	2149.0	2323.0
65°	2053.4	1785.0	1606.7	1792.5	2048.1
67.5°	1692.6	1484.2	1309.2	1485.3	1682.9
70°	1389.7	1243.7	1101.9	1234.0	1375.8
72.5°	1090.1	1007.4	938.7	1004.2	1093.3
75°	852.7	798.0	800.1	806.6	858.1
77.5°	666.9	639.0	682.0	642.2	661.6
80°	526.3	511.2	570.3	511.2	514.4
82.5°	418.9	404.9	452.1	406.0	417.8
85°	326.5	317.9	344.7	316.8	317.9
87.5°	244.9	249.2	252.4	250.2	238.4
90°	195.5	208.4	198.7	206.2	192.2
92.5°	171.8	182.6	182.6	185.8	167.5
95°	149.3	160.0	166.5	157.9	148.2
97.5°	130.0	140.7	148.2	140.7	130.0
100°	111.7	119.2	126.7	117.1	109.5
102.5°	93.4	96.7	98.8	96.7	92.4
105°	72.0	68.7	66.6	69.8	72.0
107.5°	50.5	47.3	39.7	47.3	52.6
110°	30.1	27.9	23.6	27.9	32.2



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CATALOG NUMBER: BMK-12-WCL-UNV-L740-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	15.0	14.0	14.0	15.0	16.1
115°	5.4	6.4	7.5	6.4	5.4
117.5°	2.1	3.2	3.2	3.2	2.1
120°	2.1	2.1	2.1	2.1	2.1
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)