

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: P294446

Luminaire Tested: **BMK-12-WFL-UNV-L735-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: P294446
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-103-3)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-12-WFL-UNV-L735-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE FROSTED LENS
Light Source: (528) 70 CRI 3500K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12859.0 lumens
Efficiency: N/A
Efficacy: 173.1 lumens/watt
Spacing Criteria (0/90/45): 1.7 / 1.7 / 1.72
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

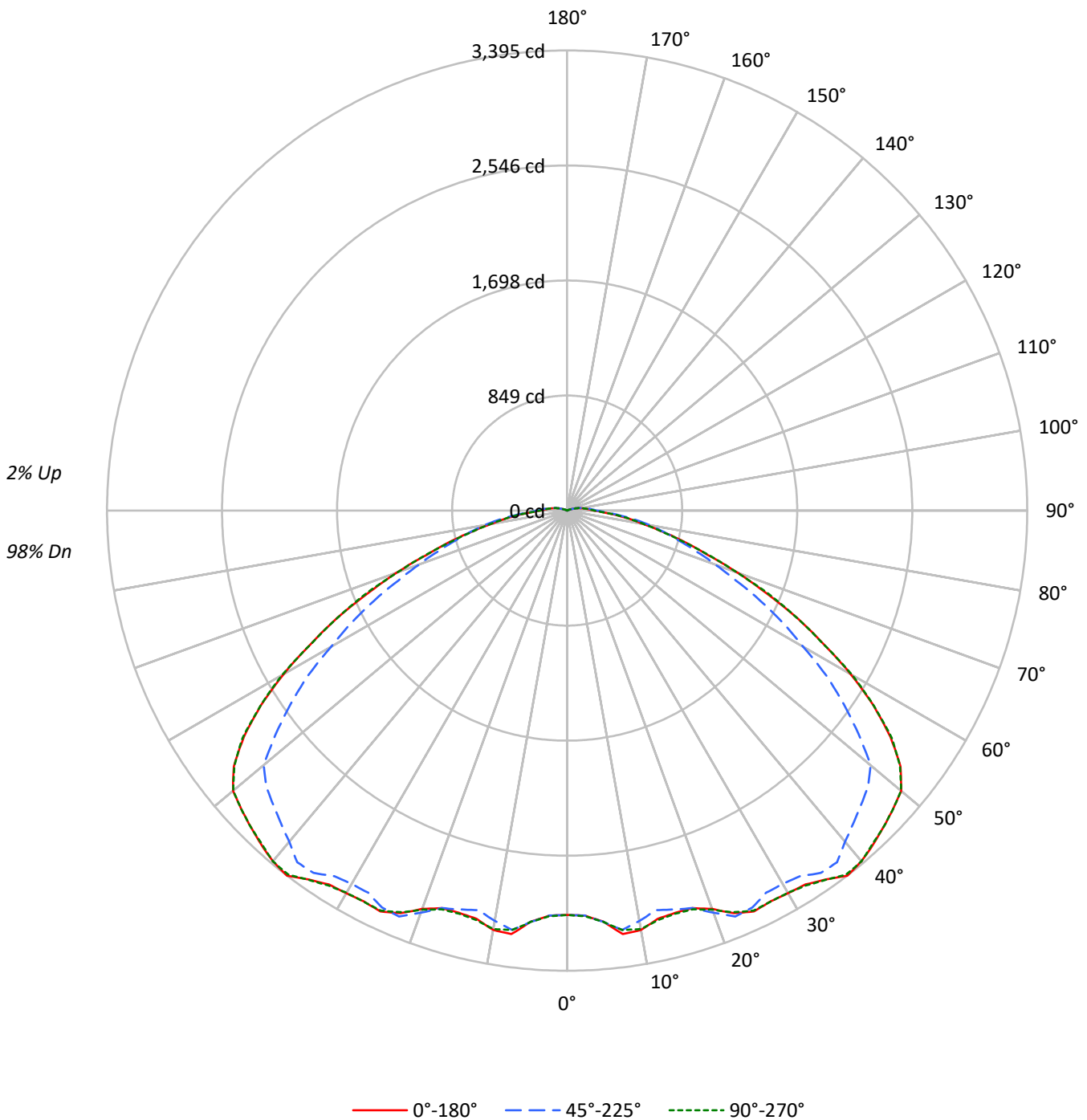
Input Watts (W): 74.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	102	97	93	104	100	95	92	95	91	88	91	88	85	87	84	82	80
2	97	88	81	75	94	86	79	74	82	76	72	78	74	70	75	71	68	65
3	88	77	68	61	85	75	67	60	71	65	59	68	62	58	65	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	43	56	48	42	53	47	41	51	45	41	38
6	67	53	44	37	65	52	43	37	50	42	36	48	41	36	46	40	35	33
7	62	48	38	32	60	47	38	32	45	37	31	43	36	31	42	35	31	29
8	57	43	34	28	56	42	34	28	41	33	28	39	32	27	38	32	27	25
9	53	39	31	25	52	39	30	25	37	30	25	36	29	24	35	29	24	22
10	50	36	28	22	48	35	28	22	34	27	22	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22995	22995	22995
5°	23306	23322	23319
10°	24089	23567	24031
15°	23762	23559	23808
20°	24588	24820	24636
25°	26285	26045	26234
30°	27143	26476	27114
35°	28862	28347	28889
40°	30900	29178	30893
45°	32152	29880	32156
50°	33782	30678	33764
55°	33437	28594	33568
60°	30896	25719	31068
65°	27162	22837	27136
70°	22681	19716	22532
75°	18560	17610	18172
80°	15098	16281	15286
85°	13195	14347	13393



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.1	2.3
10°-20°	870.5	6.8
20°-30°	1480.7	11.5
30°-40°	2062.1	16.0
40°-50°	2467.5	19.2
50°-60°	2399.5	18.7
60°-70°	1702.3	13.2
70°-80°	927.0	7.2
80°-90°	406.3	3.2
90°-100°	168.8	1.3
100°-110°	69.3	0.5
110°-120°	10.7	0.1
120°-130°	0.3	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°	2645.3	20.6
0°-40°	4707.4	36.6
0°-60°	9574.4	74.5
0°-90°	12610.0	98.1
90°-120°	248.8	1.9
90°-150°	249.0	1.9
90°-180°	249.0	1.9
0°-180°	12859.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2983	2983	2983	2983	2983	
5°	3043	3038	3045	3039	3045	296
15°	3072	3034	3046	3028	3078	876
25°	3262	3178	3232	3181	3256	1497
35°	3323	3326	3264	3315	3326	2092
45°	3301	3194	3068	3198	3302	2554
55°	2912	2694	2490	2699	2923	2575
65°	1870	1708	1572	1710	1868	1846
75°	901	844	855	846	882	965
85°	353	352	384	355	358	333
90°	197	212	217	212	199	113
95°	144	151	162	153	146	109
105°	63	63	62	64	63	68
115°	6	8	9	7	6	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2982.8	2982.8	2982.8	2982.8	2982.8
2.5°	2990.3	2988.5	2990.6	2991.3	2994.5
5°	3043.1	3038.1	3045.2	3039.2	3044.8
7.5°	3151.2	3126.4	3120.3	3118.6	3121.4
10°	3142.0	3124.2	3073.9	3123.5	3134.5
12.5°	3084.9	3066.5	3019.3	3064.7	3095.2
15°	3072.5	3033.5	3046.3	3027.8	3078.5
17.5°	3074.3	3039.5	3075.0	3036.7	3083.8
20°	3127.4	3105.1	3156.9	3102.6	3133.5
22.5°	3216.1	3177.1	3240.9	3165.0	3207.5
25°	3262.1	3177.8	3232.4	3181.0	3255.8
27.5°	3250.1	3194.1	3178.8	3193.7	3251.9
30°	3259.3	3227.8	3179.2	3222.4	3255.8
32.5°	3271.3	3252.6	3197.6	3250.4	3278.4
35°	3323.1	3325.6	3263.9	3314.9	3326.3
37.5°	3394.7	3316.4	3270.6	3311.0	3383.4
40°	3378.0	3272.8	3189.8	3272.4	3377.3
42.5°	3341.2	3244.1	3126.0	3245.5	3335.2
45°	3301.1	3193.7	3067.9	3197.6	3301.5
47.5°	3260.4	3174.6	3010.8	3170.7	3260.4
50°	3217.5	3064.3	2921.8	3065.1	3215.7
52.5°	3100.9	2903.4	2709.9	2903.4	3095.2
55°	2911.9	2693.6	2490.1	2698.9	2923.3
57.5°	2681.5	2489.0	2267.9	2486.6	2684.4
60°	2418.2	2220.0	2013.0	2234.2	2431.6
62.5°	2132.1	1991.0	1795.0	1978.6	2130.3
65°	1870.2	1707.8	1572.4	1709.6	1868.4
67.5°	1587.3	1459.0	1347.7	1456.8	1612.8
70°	1336.3	1229.3	1161.6	1229.3	1327.5
72.5°	1087.9	1033.6	999.6	1031.5	1099.9
75°	900.7	843.6	854.6	846.5	881.9
77.5°	719.2	690.9	731.6	691.2	714.6
80°	570.3	564.3	615.0	562.5	577.4
82.5°	457.3	450.5	498.4	448.4	462.2
85°	352.7	352.0	383.5	354.8	358.0
87.5°	260.5	269.7	284.3	271.2	260.9
90°	196.7	212.0	216.6	211.6	199.2
92.5°	168.4	178.6	185.4	178.3	171.2
95°	143.9	151.4	162.0	153.1	145.7
97.5°	121.9	129.0	136.5	129.0	123.0
100°	101.4	106.3	113.4	107.0	102.4
102.5°	83.7	84.7	88.3	86.1	83.3
105°	62.7	63.4	62.4	63.8	63.1
107.5°	45.4	44.7	41.8	45.7	45.0
110°	28.4	28.4	27.6	28.7	28.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	14.9	16.0	17.4	16.0	15.6
115°	5.7	7.8	9.2	7.4	6.0
117.5°	2.5	3.5	3.9	3.5	2.5
120°	2.1	2.5	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)