

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: P294448

Luminaire Tested: **BMK-12-WFL-UNV-L750-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: P294448  
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-L750-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH WIDE FROSTED LENS  
Light Source: (528) 70 CRI 5000K LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13101.0 lumens  
Efficiency: N/A  
Efficacy: 176.3 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

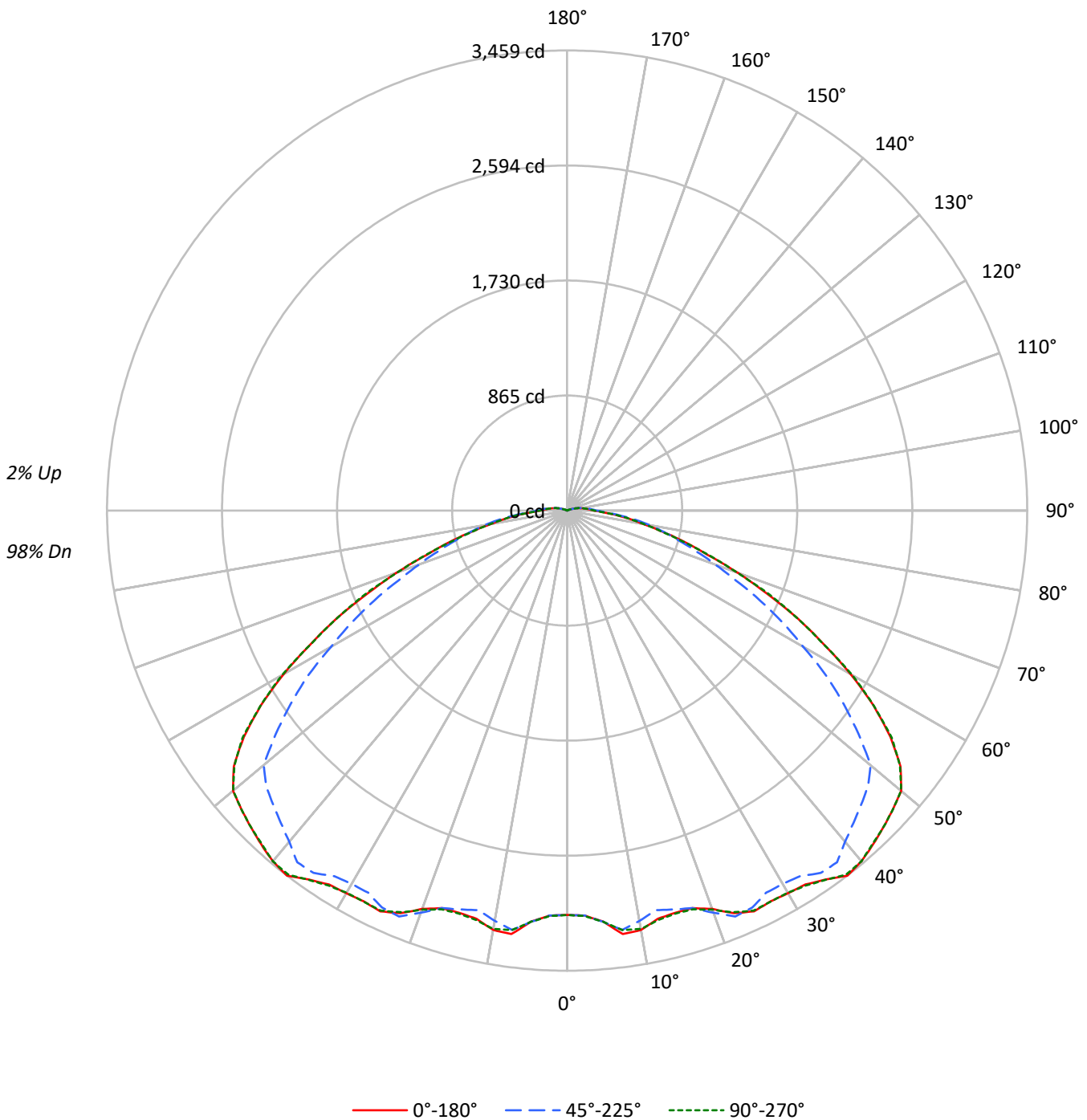
Input Watts (W): 74.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	23428	23428	23428
5°	23744	23761	23758
10°	24542	24010	24483
15°	24209	24002	24257
20°	25052	25287	25099
25°	26779	26535	26727
30°	27653	26974	27623
35°	29404	28881	29433
40°	31481	29728	31475
45°	32758	30442	32760
50°	34418	31255	34399
55°	34066	29132	34199
60°	31478	26204	31653
65°	27672	23267	27645
70°	23109	20086	22956
75°	18908	17942	18515
80°	15384	16588	15574
85°	13442	14616	13644



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	299.6	2.3
10°-20°	886.9	6.8
20°-30°	1508.5	11.5
30°-40°	2100.9	16.0
40°-50°	2513.9	19.2
50°-60°	2444.6	18.7
60°-70°	1734.3	13.2
70°-80°	944.5	7.2
80°-90°	413.9	3.2
90°-100°	172.0	1.3
100°-110°	70.6	0.5
110°-120°	10.9	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°	2695.0	20.6
0°-40°	4796.0	36.6
0°-60°	9754.6	74.5
0°-90°	12847.3	98.1
90°-120°	253.5	1.9
90°-150°	253.8	1.9
90°-180°	254.0	1.9
0°-180°	13101.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3039	3039	3039	3039	3039	
5°	3100	3095	3102	3096	3102	301
15°	3130	3091	3104	3085	3136	893
25°	3324	3238	3293	3241	3317	1525
35°	3386	3388	3325	3377	3389	2131
45°	3363	3254	3126	3258	3364	2602
55°	2967	2744	2537	2750	2978	2624
65°	1905	1740	1602	1742	1904	1881
75°	918	860	871	862	898	983
85°	359	359	391	362	365	340
90°	200	216	221	216	203	115
95°	147	154	165	156	148	111
105°	64	65	64	65	64	69
115°	6	8	9	8	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°	3039.0	3039.0	3039.0	3039.0	3039.0
2.5°	3046.5	3044.7	3046.9	3047.6	3050.9
5°	3100.3	3095.3	3102.5	3096.4	3102.1
7.5°	3210.5	3185.2	3179.1	3177.3	3180.2
10°	3201.1	3183.0	3131.8	3182.3	3193.5
12.5°	3143.0	3124.2	3076.1	3122.4	3153.4
15°	3130.3	3090.6	3103.6	3084.8	3136.5
17.5°	3132.1	3096.7	3132.8	3093.8	3141.9
20°	3186.3	3163.5	3216.3	3161.0	3192.4
22.5°	3276.6	3236.9	3301.9	3224.6	3267.9
25°	3323.5	3237.6	3293.2	3240.8	3317.0
27.5°	3311.2	3254.2	3238.7	3253.8	3313.1
30°	3320.6	3288.5	3239.0	3283.1	3317.0
32.5°	3332.9	3313.8	3257.8	3311.6	3340.1
35°	3385.6	3388.2	3325.3	3377.3	3388.9
37.5°	3458.6	3378.8	3332.2	3373.4	3447.0
40°	3441.6	3334.4	3249.9	3334.0	3440.9
42.5°	3404.1	3305.1	3184.8	3306.6	3397.9
45°	3363.3	3253.8	3125.6	3257.8	3363.6
47.5°	3321.7	3234.3	3067.5	3230.4	3321.7
50°	3278.0	3122.0	2976.8	3122.7	3276.2
52.5°	3159.2	2958.1	2760.9	2958.1	3153.4
55°	2966.7	2744.3	2537.0	2749.7	2978.3
57.5°	2732.0	2535.9	2310.5	2533.4	2734.9
60°	2463.7	2261.8	2050.9	2276.2	2477.4
62.5°	2172.2	2028.5	1828.8	2015.9	2170.4
65°	1905.3	1739.9	1602.0	1741.8	1903.5
67.5°	1617.2	1486.4	1373.0	1484.3	1643.2
70°	1361.5	1252.4	1183.4	1252.4	1352.5
72.5°	1108.3	1053.1	1018.4	1050.9	1120.6
75°	917.6	859.5	870.7	862.4	898.5
77.5°	732.7	703.9	745.4	704.2	728.0
80°	581.1	574.9	626.6	573.1	588.3
82.5°	465.9	459.0	507.8	456.8	470.9
85°	359.3	358.6	390.7	361.5	364.7
87.5°	265.4	274.8	289.6	276.3	265.8
90°	200.4	216.0	220.7	215.6	203.0
92.5°	171.5	182.0	188.9	181.7	174.4
95°	146.6	154.2	165.0	156.0	148.4
97.5°	124.2	131.5	139.0	131.5	125.3
100°	103.3	108.3	115.6	109.1	104.4
102.5°	85.2	86.3	89.9	87.8	84.9
105°	63.9	64.6	63.6	65.0	64.3
107.5°	46.2	45.5	42.6	46.6	45.9
110°	28.9	28.9	28.2	29.3	28.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	15.2	16.3	17.7	16.3	15.9
115°	5.8	7.9	9.4	7.6	6.1
117.5°	2.5	3.6	4.0	3.6	2.5
120°	2.2	2.5	2.2	2.2	2.2
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)