

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: P294447

Luminaire Tested: **BMK-12-WFL-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: P294447  
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-L740-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH WIDE FROSTED 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: 13029.0 lumens  
Efficiency: N/A  
Efficacy: 175.4 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

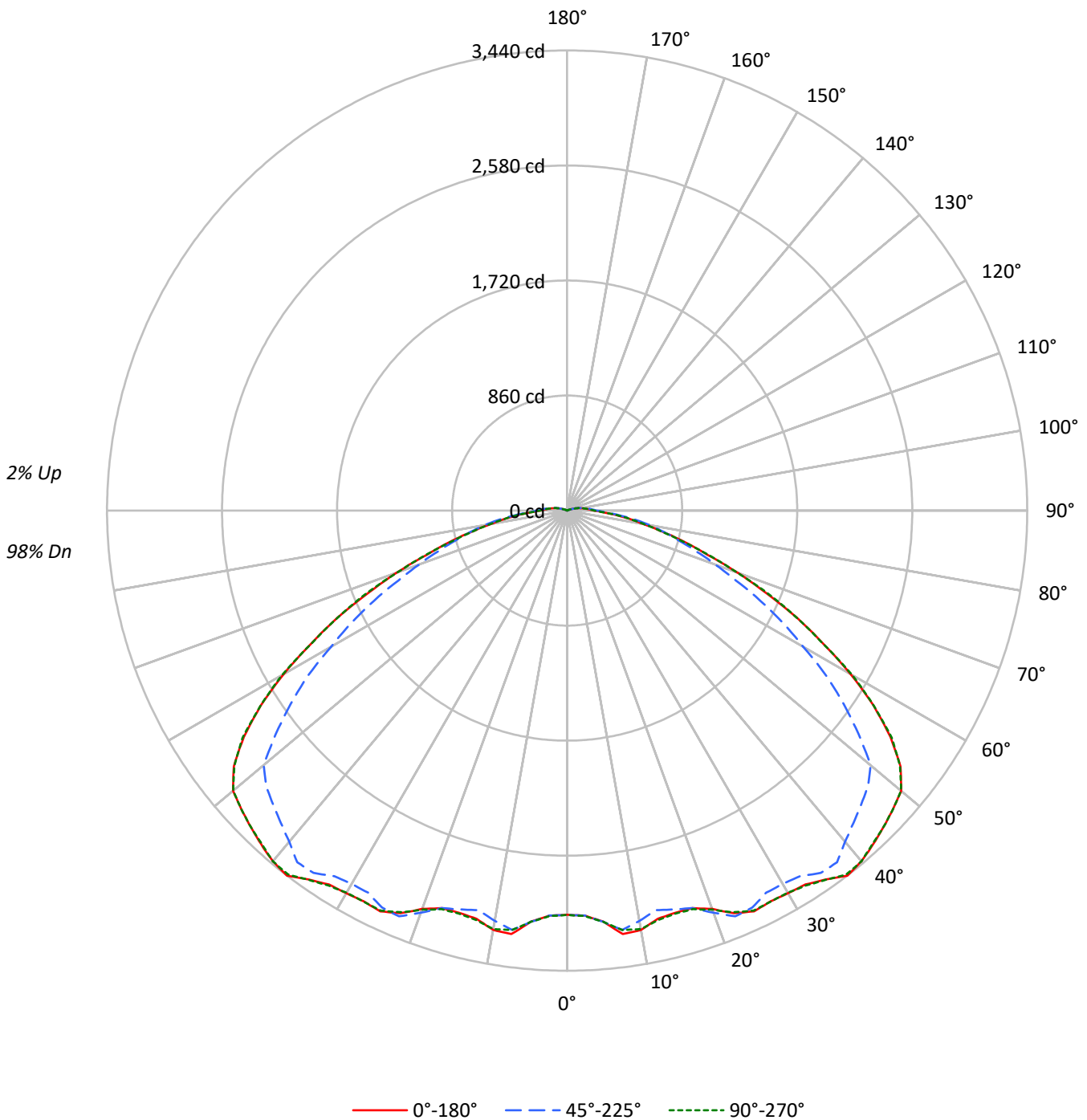
Input Watts (W): 74.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	23298	23298	23298
5°	23614	23630	23627
10°	24407	23879	24349
15°	24076	23870	24123
20°	24914	25148	24962
25°	26633	26389	26580
30°	27502	26825	27472
35°	29243	28723	29272
40°	31308	29564	31302
45°	32577	30275	32580
50°	34229	31084	34210
55°	33879	28971	34011
60°	31304	26059	31479
65°	27521	23139	27494
70°	22982	19976	22829
75°	18805	17843	18414
80°	15299	16496	15490
85°	13370	14538	13569



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	298.0	2.3
10°-20°	882.0	6.8
20°-30°	1500.3	11.5
30°-40°	2089.4	16.0
40°-50°	2500.1	19.2
50°-60°	2431.2	18.7
60°-70°	1724.8	13.2
70°-80°	939.3	7.2
80°-90°	411.7	3.2
90°-100°	171.0	1.3
100°-110°	70.2	0.5
110°-120°	10.8	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°	2680.2	20.6
0°-40°	4769.6	36.6
0°-60°	9700.9	74.5
0°-90°	12776.6	98.1
90°-120°	252.1	1.9
90°-150°	252.3	1.9
90°-180°	252.0	1.9
0°-180°	13029.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3022	3022	3022	3022	3022	
5°	3083	3078	3086	3079	3085	300
15°	3113	3074	3086	3068	3119	888
25°	3305	3220	3275	3223	3299	1516
35°	3367	3370	3307	3359	3370	2120
45°	3345	3236	3108	3240	3345	2588
55°	2950	2729	2523	2735	2962	2609
65°	1895	1730	1593	1732	1893	1870
75°	913	855	866	858	894	978
85°	357	357	389	360	363	338
90°	199	215	219	214	202	114
95°	146	153	164	155	148	111
105°	64	64	63	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°	3022.2	3022.2	3022.2	3022.2	3022.2
2.5°	3029.8	3028.0	3030.2	3030.9	3034.1
5°	3083.3	3078.3	3085.5	3079.4	3085.1
7.5°	3192.8	3167.7	3161.6	3159.8	3162.7
10°	3183.5	3165.6	3114.6	3164.8	3176.0
12.5°	3125.7	3107.0	3059.2	3105.2	3136.1
15°	3113.1	3073.6	3086.5	3067.9	3119.2
17.5°	3114.9	3079.7	3115.6	3076.8	3124.6
20°	3168.8	3146.2	3198.6	3143.6	3174.9
22.5°	3258.6	3219.1	3283.7	3206.9	3250.0
25°	3305.3	3219.8	3275.1	3223.0	3298.8
27.5°	3293.0	3236.3	3220.9	3235.9	3294.8
30°	3302.4	3270.4	3221.2	3265.0	3298.8
32.5°	3314.6	3295.6	3239.9	3293.4	3321.8
35°	3367.0	3369.5	3307.1	3358.8	3370.3
37.5°	3439.6	3360.2	3313.9	3354.8	3428.1
40°	3422.7	3316.0	3232.0	3315.7	3422.0
42.5°	3385.4	3286.9	3167.3	3288.4	3379.2
45°	3344.8	3235.9	3108.4	3239.9	3345.1
47.5°	3303.5	3216.6	3050.6	3212.6	3303.5
50°	3260.0	3104.9	2960.5	3105.6	3258.2
52.5°	3141.8	2941.8	2745.7	2941.8	3136.1
55°	2950.4	2729.2	2523.0	2734.6	2961.9
57.5°	2717.0	2522.0	2297.8	2519.4	2719.8
60°	2450.1	2249.4	2039.6	2263.7	2463.8
62.5°	2160.3	2017.3	1818.7	2004.8	2158.5
65°	1894.9	1730.4	1593.2	1732.2	1893.1
67.5°	1608.3	1478.3	1365.5	1476.1	1634.1
70°	1354.0	1245.5	1176.9	1245.5	1345.0
72.5°	1102.2	1047.3	1012.8	1045.1	1114.4
75°	912.6	854.8	865.9	857.7	893.6
77.5°	728.7	700.0	741.3	700.3	724.0
80°	577.9	571.8	623.1	570.0	585.1
82.5°	463.3	456.5	505.0	454.3	468.3
85°	357.4	356.6	388.6	359.5	362.7
87.5°	264.0	273.3	288.0	274.7	264.3
90°	199.3	214.8	219.4	214.4	201.8
92.5°	170.6	181.0	187.8	180.7	173.5
95°	145.8	153.4	164.1	155.2	147.6
97.5°	123.5	130.7	138.3	130.7	124.6
100°	102.7	107.7	114.9	108.5	103.8
102.5°	84.8	85.8	89.4	87.3	84.4
105°	63.6	64.3	63.2	64.6	63.9
107.5°	46.0	45.3	42.4	46.3	45.6
110°	28.7	28.7	28.0	29.1	28.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	15.1	16.2	17.6	16.2	15.8
115°	5.7	7.9	9.3	7.5	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)