

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: P295502

Luminaire Tested: **BMK-24-MCL-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: P295502  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-251-5)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: BMK-24-MCL-UNV-L750-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH MEDIUM CLEAR 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: 26600.0 lumens  
Efficiency: N/A  
Efficacy: 171.1 lumens/watt  
Spacing Criteria (0/90/45): 1.37 / 1.37 / 1.37  
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')  
CIE Type: Direct

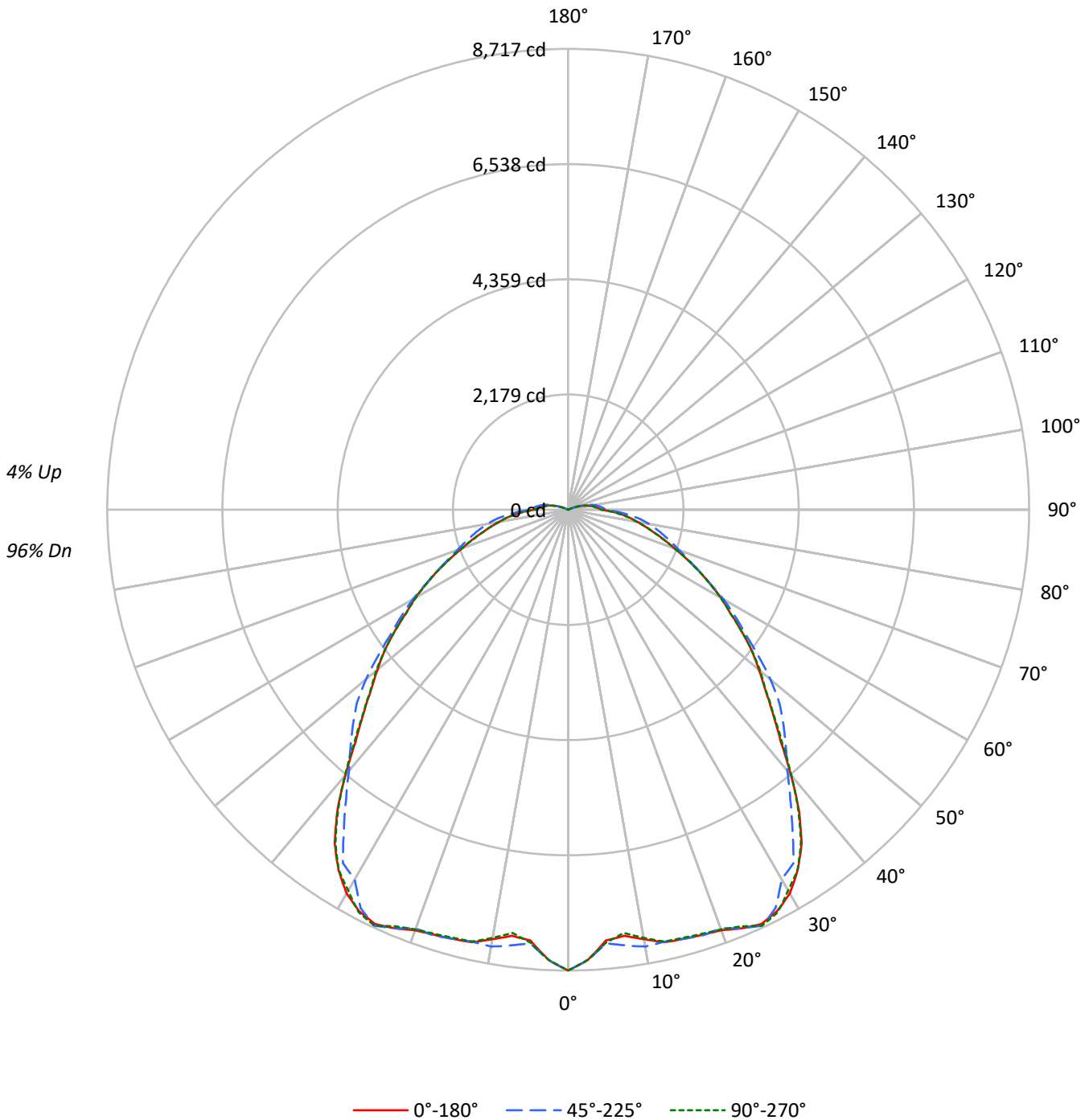
Input Watts (W): 155.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	96
1	107	102	97	93	104	99	95	91	94	91	88	90	87	84	86	83	81	79
2	97	89	82	76	94	87	80	75	82	77	72	79	74	70	75	71	68	66
3	89	78	70	63	86	76	69	62	73	66	61	69	64	59	66	62	58	55
4	81	69	61	54	79	68	60	53	65	58	52	62	56	51	59	54	50	48
5	75	62	53	46	73	61	52	46	58	51	45	56	49	44	54	48	44	41
6	69	56	47	41	67	55	46	40	53	45	40	51	44	39	49	43	38	36
7	64	51	42	36	62	50	42	36	48	41	35	46	40	35	45	39	34	32
8	60	46	38	32	58	46	37	32	44	37	31	42	36	31	41	35	31	29
9	56	43	34	29	54	42	34	29	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	36	30	25	35	29	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	67197	67197	67197
5°	62647	63048	62933
10°	63237	64332	63048
15°	65019	64994	64845
20°	66570	66251	66410
25°	69676	69969	69917
30°	69800	67223	69276
35°	66865	64215	66643
40°	59972	58975	60069
45°	53370	56051	53526
50°	49424	52415	49704
55°	45918	46897	45954
60°	42666	43320	42490
65°	39404	39513	39373
70°	36236	37793	36364
75°	34692	38628	34802
80°	35109	41238	34797
85°	37639	43467	37478



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	791.7	3.0
10°-20°	2386.8	9.0
20°-30°	3944.1	14.8
30°-40°	4694.2	17.6
40°-50°	4378.0	16.5
50°-60°	3648.3	13.7
60°-70°	2729.6	10.3
70°-80°	1895.2	7.1
80°-90°	1148.7	4.3
90°-100°	614.6	2.3
100°-110°	319.5	1.2
110°-120°	48.5	0.2
120°-130°	0.8	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°	7122.6	26.8
0°-40°	11816.8	44.4
0°-60°	19843.1	74.6
0°-90°	25616.6	96.3
90°-120°	982.6	3.7
90°-150°	983.4	3.7
90°-180°	983.0	3.7
0°-180°	26600.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8717	8717	8717	8717	8717	
5°	8180	8241	8232	8220	8217	786
15°	8407	8465	8404	8446	8385	2382
25°	8647	8643	8684	8659	8677	3957
35°	7699	7573	7394	7577	7673	4754
45°	5480	5674	5755	5683	5496	4263
55°	3999	4062	4084	4065	4002	3581
65°	2713	2744	2721	2743	2711	2689
75°	1684	1780	1875	1783	1689	1803
85°	1006	1035	1162	1035	1002	888
90°	636	679	712	673	626	367
95°	523	557	623	554	528	410
105°	293	299	334	296	296	307
115°	28	32	42	33	29	47
125°	0	0	0	0	0	1
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°	8716.6	8716.6	8716.6	8716.6	8716.6
2.5°	8527.8	8535.3	8526.7	8504.3	8520.3
5°	8180.0	8240.8	8232.3	8220.5	8217.3
7.5°	8129.8	8221.6	8313.4	8213.1	8074.4
10°	8248.3	8340.0	8391.2	8332.6	8223.7
12.5°	8381.6	8377.4	8372.0	8367.8	8367.8
15°	8407.2	8464.9	8404.0	8445.7	8384.8
17.5°	8430.7	8472.3	8445.7	8465.9	8412.6
20°	8467.0	8509.7	8426.4	8489.4	8446.7
22.5°	8570.5	8601.4	8567.3	8598.2	8531.0
25°	8647.3	8643.0	8683.6	8659.0	8677.2
27.5°	8558.7	8532.1	8495.8	8487.3	8584.3
30°	8381.6	8238.7	8072.2	8207.7	8318.7
32.5°	8079.7	8087.2	7928.2	8096.8	8075.4
35°	7698.8	7572.9	7393.7	7577.2	7673.2
37.5°	7165.4	7070.4	6898.6	7069.3	7144.0
40°	6556.2	6572.2	6447.3	6569.0	6566.8
42.5°	5945.9	6102.7	6089.9	6077.1	5991.8
45°	5479.6	5673.8	5754.9	5683.4	5495.6
47.5°	5059.3	5330.3	5419.9	5332.4	5071.0
50°	4707.2	4886.4	4992.1	4885.4	4733.9
52.5°	4371.1	4434.1	4521.6	4453.3	4376.5
55°	3998.8	4061.7	4084.1	4064.9	4002.0
57.5°	3628.6	3727.8	3732.0	3720.3	3626.4
60°	3339.4	3380.0	3390.6	3393.8	3325.6
62.5°	3007.6	3063.1	3024.7	3063.1	3015.1
65°	2713.1	2744.1	2720.6	2743.0	2711.0
67.5°	2410.1	2495.5	2458.2	2491.2	2417.6
70°	2134.9	2243.7	2226.6	2245.8	2142.4
72.5°	1908.7	2004.7	2044.2	1997.3	1899.1
75°	1683.6	1779.6	1874.6	1782.8	1688.9
77.5°	1505.4	1578.0	1712.4	1584.4	1503.3
80°	1326.2	1393.4	1557.7	1388.0	1314.4
82.5°	1181.1	1212.0	1377.4	1218.4	1174.7
85°	1006.1	1034.9	1161.9	1034.9	1001.8
87.5°	826.9	848.2	932.5	858.9	815.1
90°	635.9	678.6	711.6	673.2	626.3
92.5°	581.5	612.4	670.0	607.1	577.2
95°	522.8	556.9	623.1	553.7	528.1
97.5°	479.0	496.1	561.2	495.0	475.8
100°	424.6	441.7	507.8	436.4	418.2
102.5°	361.7	371.3	432.1	374.5	362.7
105°	293.4	298.7	333.9	295.5	295.5
107.5°	218.7	215.5	227.3	212.3	217.6
110°	140.8	131.2	141.9	131.2	143.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	76.8	69.3	83.2	70.4	75.8
115°	27.7	32.0	41.6	33.1	28.8
117.5°	7.5	12.8	14.9	12.8	7.5
120°	6.4	7.5	6.4	7.5	6.4
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)