

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: P295452

Luminaire Tested: **BMK-15-MFL-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: P295452  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-251-3)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: BMK-15-MFL-UNV-L735-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH MEDIUM 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: 16024.0 lumens  
Efficiency: N/A  
Efficacy: 170.8 lumens/watt  
Spacing Criteria (0/90/45): 1.33 / 1.33 / 1.36  
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')  
CIE Type: Direct

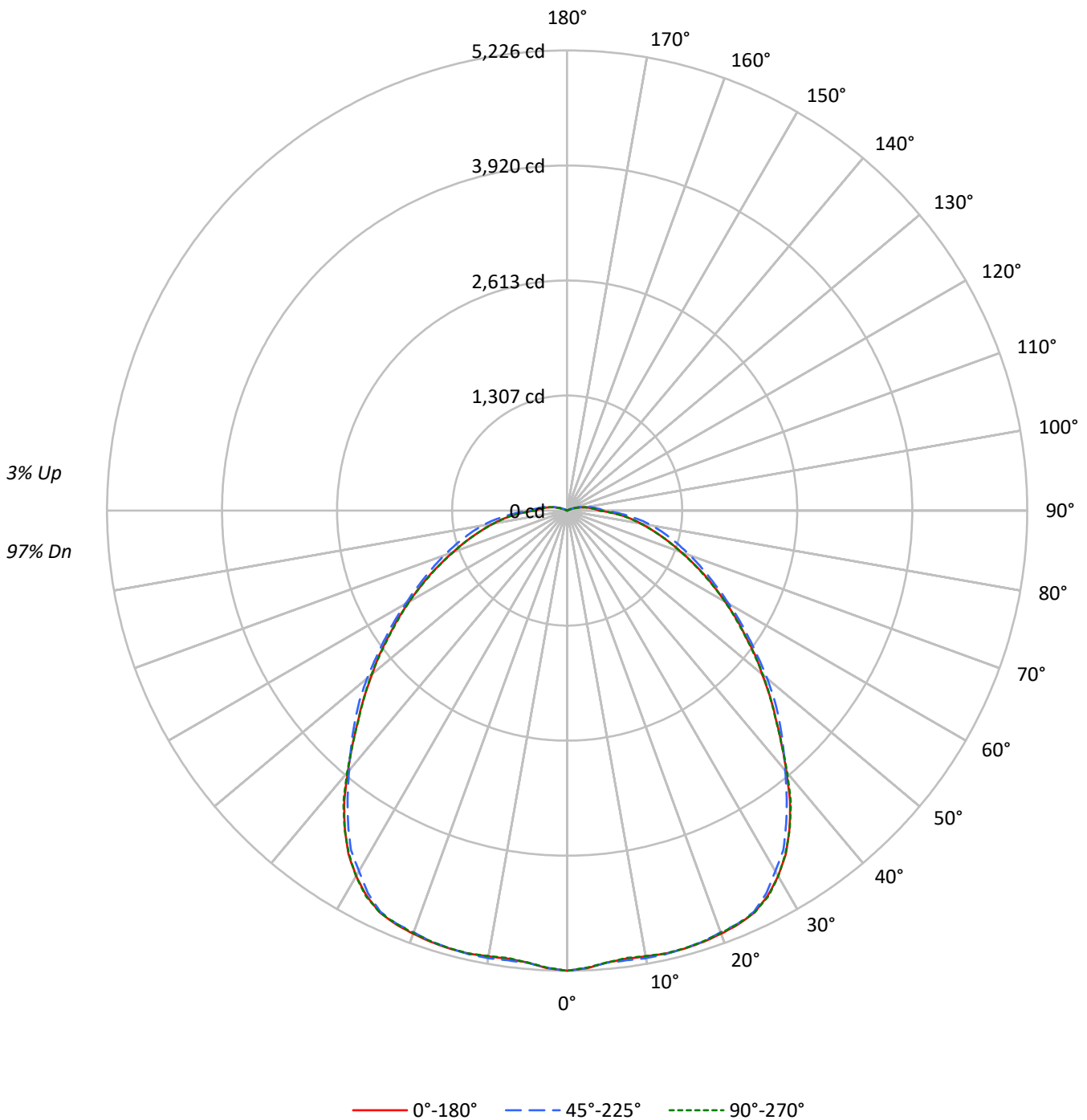
Input Watts (W): 93.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	97
1	107	102	97	93	104	99	95	91	94	91	88	90	87	84	86	83	81	79
2	97	89	81	75	94	86	80	74	82	77	72	78	74	70	75	71	68	65
3	89	78	69	63	86	76	68	62	72	66	60	69	64	59	66	62	58	55
4	81	69	60	53	79	67	59	53	64	57	52	62	56	51	59	54	49	47
5	75	62	53	46	72	60	52	45	58	50	45	56	49	44	53	48	43	41
6	69	56	47	40	67	54	46	40	52	45	39	50	44	39	48	43	38	36
7	64	50	42	35	62	49	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	31	44	36	31	42	36	31	41	35	30	28
9	56	42	34	28	54	42	34	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	40285	40285	40285
5°	39465	39491	39460
10°	39406	39573	39386
15°	39827	39796	39801
20°	40204	40068	40136
25°	40575	40484	40564
30°	39903	39375	39941
35°	38228	37672	38285
40°	35427	35234	35554
45°	32663	33267	32624
50°	30354	31130	30499
55°	28302	28900	28226
60°	26482	27081	26457
65°	24880	25771	24736
70°	23342	25156	23320
75°	22586	25156	22559
80°	22571	25751	22518
85°	23281	26266	23206



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	492.0	3.1
10°-20°	1457.0	9.1
20°-30°	2304.5	14.4
30°-40°	2725.5	17.0
40°-50°	2619.9	16.3
50°-60°	2238.8	14.0
60°-70°	1737.0	10.8
70°-80°	1225.3	7.6
80°-90°	709.4	4.4
90°-100°	333.1	2.1
100°-110°	153.4	1.0
110°-120°	27.6	0.2
120°-130°	0.4	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°	4253.5	26.5
0°-40°	6979.0	43.6
0°-60°	11837.7	73.9
0°-90°	15509.4	96.8
90°-120°	514.1	3.2
90°-150°	514.6	3.2
90°-180°	515.0	3.2
0°-180°	16024.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5226	5226	5226	5226	5226	
5°	5153	5154	5156	5149	5152	492
15°	5150	5155	5146	5149	5146	1457
25°	5036	5023	5024	5022	5034	2311
35°	4402	4372	4338	4378	4408	2740
45°	3354	3399	3416	3391	3350	2597
55°	2465	2499	2517	2502	2458	2214
65°	1713	1751	1774	1747	1703	1699
75°	1096	1150	1221	1154	1095	1166
85°	622	645	702	645	620	552
90°	364	399	418	398	363	211
95°	285	300	327	300	286	218
105°	139	141	152	142	139	148
115°	16	21	28	21	16	24
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°	5225.7	5225.7	5225.7	5225.7	5225.7
2.5°	5200.6	5195.3	5197.3	5191.4	5195.3
5°	5153.1	5154.4	5156.4	5149.1	5152.4
7.5°	5132.6	5139.2	5151.1	5135.9	5124.1
10°	5139.9	5151.1	5161.7	5145.2	5137.3
12.5°	5153.8	5157.1	5161.0	5153.1	5152.4
15°	5149.8	5155.1	5145.8	5149.1	5146.5
17.5°	5137.3	5139.2	5132.6	5135.9	5132.0
20°	5113.5	5110.2	5096.3	5106.9	5104.9
22.5°	5085.1	5080.5	5076.5	5082.5	5079.2
25°	5035.6	5023.1	5024.4	5022.4	5034.3
27.5°	4932.7	4912.2	4898.4	4908.3	4942.6
30°	4791.5	4763.8	4728.1	4761.8	4796.1
32.5°	4623.9	4602.7	4570.4	4600.8	4615.3
35°	4401.5	4372.4	4337.5	4377.7	4408.1
37.5°	4159.3	4141.5	4095.9	4139.5	4171.8
40°	3872.9	3876.9	3851.8	3886.1	3886.8
42.5°	3606.3	3633.4	3631.4	3631.4	3606.3
45°	3353.6	3399.1	3415.6	3391.2	3349.6
47.5°	3123.9	3169.5	3197.8	3165.5	3121.9
50°	2891.0	2939.2	2964.9	2933.2	2904.8
52.5°	2685.1	2706.9	2732.0	2704.2	2673.9
55°	2464.7	2499.0	2516.8	2501.6	2458.1
57.5°	2272.7	2297.1	2318.2	2303.0	2259.5
60°	2072.7	2099.8	2119.6	2107.7	2070.7
62.5°	1886.6	1926.2	1940.7	1921.6	1882.0
65°	1713.1	1750.7	1774.4	1747.4	1703.2
67.5°	1540.2	1589.7	1627.3	1595.0	1534.9
70°	1375.2	1440.5	1482.1	1432.6	1373.9
72.5°	1235.3	1294.0	1347.5	1292.1	1230.0
75°	1096.1	1150.2	1220.8	1154.2	1094.8
77.5°	970.0	1021.5	1098.7	1019.5	964.1
80°	852.6	893.5	972.7	890.9	850.6
82.5°	737.8	768.1	845.3	766.8	735.1
85°	622.3	645.4	702.1	645.4	620.3
87.5°	487.0	524.6	556.9	523.3	479.7
90°	364.3	399.2	417.7	397.9	362.9
92.5°	324.7	342.5	372.2	342.5	324.7
95°	285.1	300.3	327.3	299.6	286.4
97.5°	247.5	259.3	285.1	258.0	248.8
100°	213.1	219.1	242.8	220.4	211.8
102.5°	176.2	180.2	197.3	178.8	176.2
105°	139.2	141.2	151.8	141.9	138.6
107.5°	101.6	103.6	108.9	102.9	101.0
110°	67.3	68.6	75.2	68.6	68.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	38.9	42.2	48.8	42.2	38.9
115°	16.5	21.1	27.7	21.1	16.5
117.5°	5.3	8.6	10.6	8.6	4.6
120°	3.3	4.0	3.3	4.0	3.3
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)