

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: P295496

Luminaire Tested: **BMK-18-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: P295496
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-18-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: 20028.0 lumens
Efficiency: N/A
Efficacy: 176.0 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

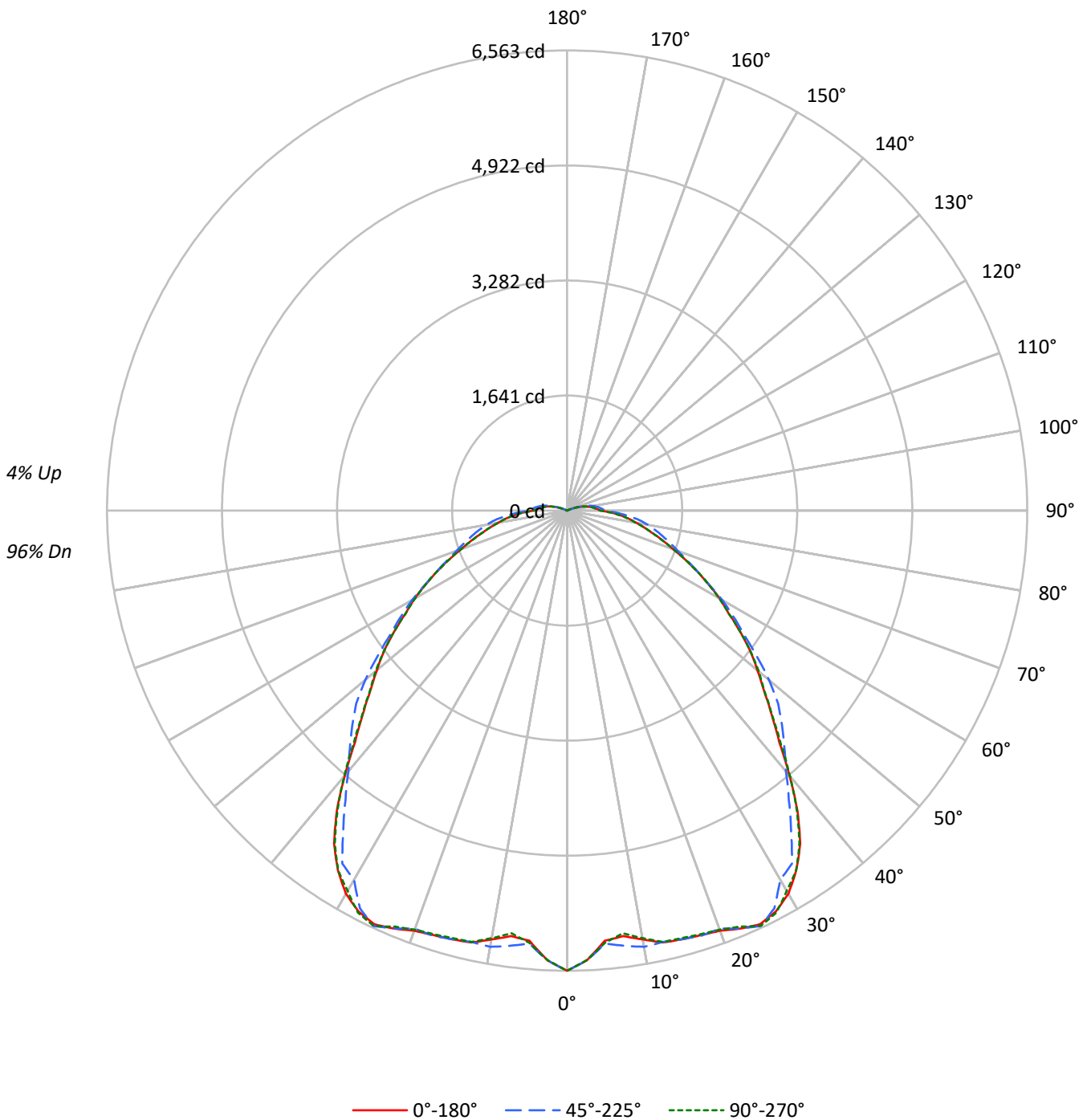
Input Watts (W): 113.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	50595	50595	50595
5°	47169	47470	47384
10°	47613	48438	47471
15°	48955	48936	48824
20°	50123	49882	50002
25°	52461	52681	52642
30°	52555	50615	52160
35°	50345	48349	50178
40°	45154	44405	45228
45°	40184	42203	40302
50°	37213	39465	37424
55°	34573	35311	34600
60°	32126	32617	31991
65°	29669	29750	29645
70°	27283	28456	27378
75°	26120	29083	26203
80°	26434	31048	26201
85°	28338	32727	28219



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	596.1	3.0
10°-20°	1797.1	9.0
20°-30°	2969.6	14.8
30°-40°	3534.4	17.6
40°-50°	3296.4	16.5
50°-60°	2746.9	13.7
60°-70°	2055.2	10.3
70°-80°	1426.9	7.1
80°-90°	864.9	4.3
90°-100°	462.7	2.3
100°-110°	240.5	1.2
110°-120°	36.5	0.2
120°-130°	0.6	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°	5362.9	26.8
0°-40°	8897.3	44.4
0°-60°	14940.6	74.6
0°-90°	19287.5	96.3
90°-120°	739.8	3.7
90°-150°	740.4	3.7
90°-180°	740.0	3.7
0°-180°	20028.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6563	6563	6563	6563	6563	
5°	6159	6205	6198	6190	6187	592
15°	6330	6374	6328	6359	6313	1793
25°	6511	6508	6538	6520	6533	2979
35°	5797	5702	5567	5705	5777	3579
45°	4126	4272	4333	4279	4138	3210
55°	3011	3058	3075	3061	3013	2697
65°	2043	2066	2048	2065	2041	2025
75°	1268	1340	1411	1342	1272	1357
85°	758	779	875	779	754	669
90°	479	511	536	507	472	277
95°	394	419	469	417	398	309
105°	221	225	251	222	222	231
115°	21	24	31	25	22	35
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°	6563.0	6563.0	6563.0	6563.0	6563.0
2.5°	6420.9	6426.5	6420.1	6403.2	6415.2
5°	6159.0	6204.8	6198.3	6189.5	6187.1
7.5°	6121.2	6190.3	6259.4	6183.9	6079.5
10°	6210.4	6279.5	6318.0	6273.9	6191.9
12.5°	6310.8	6307.6	6303.6	6300.4	6300.4
15°	6330.1	6373.5	6327.7	6359.0	6313.2
17.5°	6347.8	6379.1	6359.0	6374.3	6334.1
20°	6375.1	6407.2	6344.5	6391.9	6359.8
22.5°	6453.0	6476.3	6450.6	6473.9	6423.3
25°	6510.8	6507.6	6538.1	6519.7	6533.3
27.5°	6444.2	6424.1	6396.8	6390.3	6463.4
30°	6310.8	6203.2	6077.8	6179.9	6263.4
32.5°	6083.5	6089.1	5969.4	6096.3	6080.3
35°	5796.7	5701.9	5566.9	5705.1	5777.4
37.5°	5395.0	5323.5	5194.2	5322.7	5379.0
40°	4936.3	4948.4	4854.4	4946.0	4944.4
42.5°	4476.8	4594.9	4585.3	4575.7	4511.4
45°	4125.8	4272.0	4333.1	4279.2	4137.9
47.5°	3809.3	4013.3	4080.8	4014.9	3818.1
50°	3544.2	3679.2	3758.7	3678.4	3564.3
52.5°	3291.2	3338.6	3404.4	3353.0	3295.2
55°	3010.8	3058.2	3075.1	3060.6	3013.2
57.5°	2732.1	2806.8	2810.0	2801.1	2730.5
60°	2514.4	2544.9	2552.9	2555.3	2503.9
62.5°	2264.5	2306.3	2277.4	2306.3	2270.2
65°	2042.8	2066.1	2048.4	2065.3	2041.2
67.5°	1814.7	1878.9	1850.8	1875.7	1820.3
70°	1607.4	1689.4	1676.5	1691.0	1613.0
72.5°	1437.1	1509.4	1539.1	1503.8	1429.9
75°	1267.6	1339.9	1411.4	1342.3	1271.6
77.5°	1133.5	1188.1	1289.3	1192.9	1131.9
80°	998.5	1049.1	1172.8	1045.1	989.7
82.5°	889.3	912.6	1037.1	917.4	884.4
85°	757.5	779.2	874.8	779.2	754.3
87.5°	622.6	638.6	702.1	646.7	613.7
90°	478.8	510.9	535.8	506.9	471.5
92.5°	437.8	461.1	504.5	457.1	434.6
95°	393.6	419.3	469.1	416.9	397.6
97.5°	360.7	373.5	422.5	372.7	358.3
100°	319.7	332.6	382.4	328.6	314.9
102.5°	272.3	279.6	325.3	282.0	273.1
105°	220.9	224.9	251.4	222.5	222.5
107.5°	164.7	162.3	171.1	159.9	163.9
110°	106.0	98.8	106.8	98.8	107.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	57.8	52.2	62.7	53.0	57.0
115°	20.9	24.1	31.3	24.9	21.7
117.5°	5.6	9.6	11.2	9.6	5.6
120°	4.8	5.6	4.8	5.6	4.8
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)