

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: P295495

Luminaire Tested: **BMK-18-MCL-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: P295495
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-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH MEDIUM CLEAR 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: 19917.0 lumens
Efficiency: N/A
Efficacy: 175.0 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

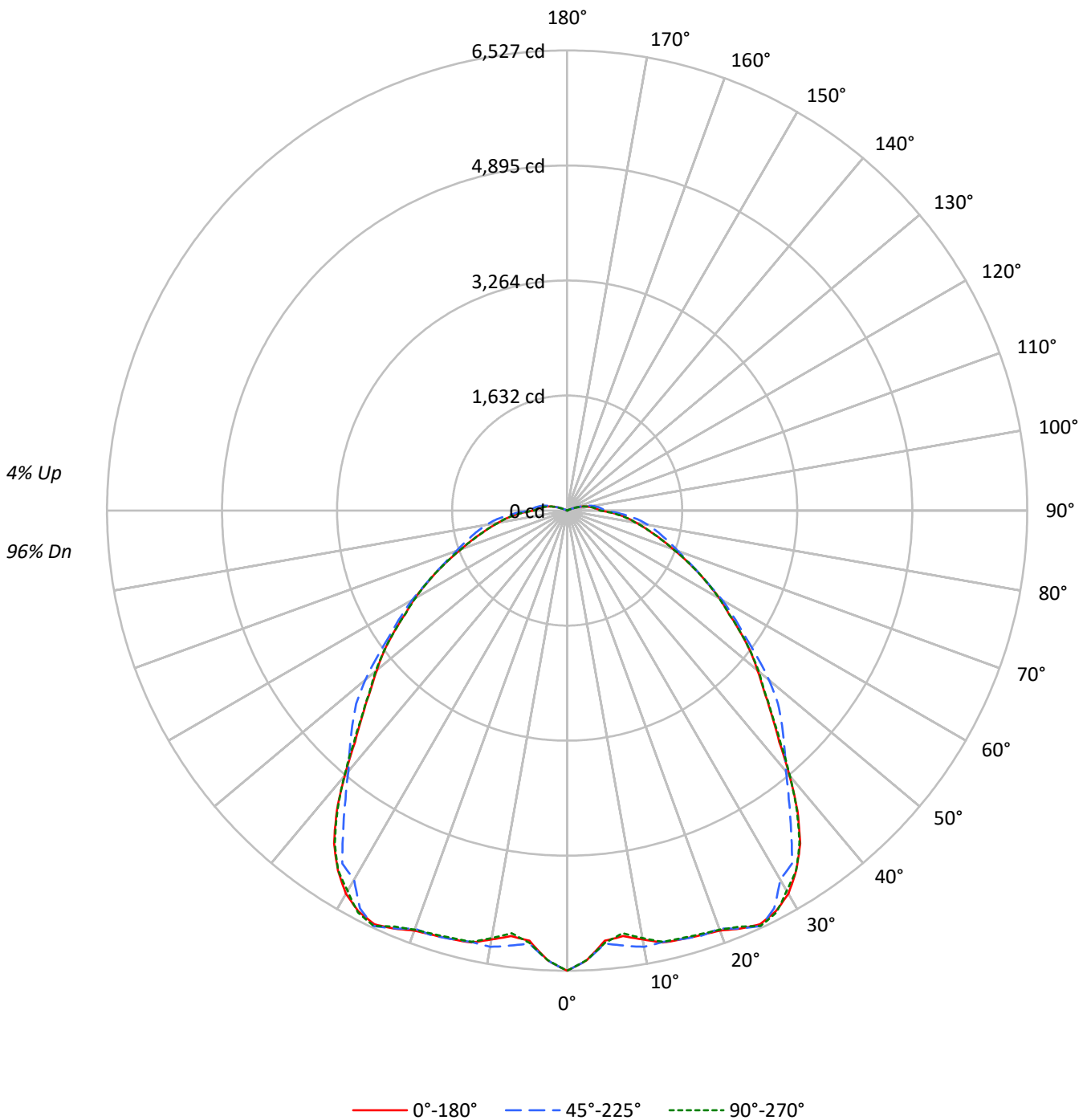
Input Watts (W): 113.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	50315	50315	50315
5°	46907	47207	47122
10°	47349	48170	47208
15°	48684	48665	48554
20°	49844	49606	49726
25°	52170	52389	52351
30°	52263	50335	51871
35°	50066	48082	49900
40°	44904	44159	44977
45°	39961	41968	40078
50°	37007	39246	37216
55°	34381	35115	34408
60°	31947	32437	31814
65°	29505	29586	29481
70°	27132	28298	27227
75°	25976	28923	26058
80°	26288	30876	26055
85°	28181	32547	28062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	592.8	3.0
10°-20°	1787.1	9.0
20°-30°	2953.2	14.8
30°-40°	3514.8	17.6
40°-50°	3278.1	16.5
50°-60°	2731.7	13.7
60°-70°	2043.8	10.3
70°-80°	1419.0	7.1
80°-90°	860.1	4.3
90°-100°	460.2	2.3
100°-110°	239.2	1.2
110°-120°	36.3	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°	5333.1	26.8
0°-40°	8848.0	44.4
0°-60°	14857.7	74.6
0°-90°	19180.7	96.3
90°-120°	735.7	3.7
90°-150°	736.4	3.7
90°-180°	736.0	3.7
0°-180°	19917.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6527	6527	6527	6527	6527	
5°	6125	6170	6164	6155	6153	589
15°	6295	6338	6293	6324	6278	1784
25°	6475	6472	6502	6484	6497	2963
35°	5765	5670	5536	5674	5745	3560
45°	4103	4248	4309	4256	4115	3192
55°	2994	3041	3058	3044	2996	2682
65°	2032	2055	2037	2054	2030	2014
75°	1261	1332	1404	1335	1265	1350
85°	753	775	870	775	750	665
90°	476	508	533	504	469	275
95°	391	417	466	415	395	307
105°	220	224	250	221	221	230
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°	6526.7	6526.7	6526.7	6526.7	6526.7
2.5°	6385.3	6390.9	6384.5	6367.7	6379.7
5°	6124.8	6170.4	6164.0	6155.2	6152.8
7.5°	6087.3	6156.0	6224.7	6149.6	6045.8
10°	6176.0	6244.7	6283.0	6239.1	6157.6
12.5°	6275.8	6272.6	6268.6	6265.4	6265.4
15°	6295.0	6338.1	6292.6	6323.8	6278.2
17.5°	6312.6	6343.7	6323.8	6338.9	6299.0
20°	6339.7	6371.7	6309.4	6356.5	6324.6
22.5°	6417.2	6440.4	6414.8	6438.0	6387.7
25°	6474.7	6471.5	6501.9	6483.5	6497.1
27.5°	6408.4	6388.5	6361.3	6354.9	6427.6
30°	6275.8	6168.8	6044.2	6145.6	6228.7
32.5°	6049.8	6055.3	5936.3	6062.5	6046.6
35°	5764.6	5670.3	5536.1	5673.5	5745.4
37.5°	5365.1	5294.0	5165.4	5293.2	5349.2
40°	4909.0	4921.0	4827.5	4918.6	4917.0
42.5°	4452.0	4569.5	4559.9	4550.3	4486.4
45°	4102.9	4248.3	4309.0	4255.5	4114.9
47.5°	3788.2	3991.1	4058.2	3992.7	3797.0
50°	3524.6	3658.8	3737.9	3658.0	3544.5
52.5°	3272.9	3320.1	3385.6	3334.4	3276.9
55°	2994.1	3041.3	3058.0	3043.6	2996.5
57.5°	2716.9	2791.2	2794.4	2785.6	2715.3
60°	2500.4	2530.8	2538.8	2541.2	2490.0
62.5°	2252.0	2293.5	2264.8	2293.5	2257.6
65°	2031.5	2054.7	2037.1	2053.9	2029.9
67.5°	1804.6	1868.5	1840.6	1865.3	1810.2
70°	1598.5	1680.0	1667.2	1681.6	1604.1
72.5°	1429.2	1501.1	1530.6	1495.5	1422.0
75°	1260.6	1332.5	1403.6	1334.9	1264.6
77.5°	1127.2	1181.5	1282.2	1186.3	1125.6
80°	993.0	1043.3	1166.3	1039.3	984.2
82.5°	884.3	907.5	1031.3	912.3	879.5
85°	753.3	774.9	870.0	774.9	750.1
87.5°	619.1	635.1	698.2	643.1	610.3
90°	476.1	508.1	532.8	504.1	468.9
92.5°	435.4	458.5	501.7	454.6	432.2
95°	391.4	417.0	466.5	414.6	395.4
97.5°	358.7	371.5	420.2	370.7	356.3
100°	317.9	330.7	380.3	326.7	313.2
102.5°	270.8	278.0	323.5	280.4	271.6
105°	219.7	223.7	250.0	221.3	221.3
107.5°	163.8	161.4	170.2	159.0	163.0
110°	105.4	98.3	106.2	98.3	107.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	57.5	51.9	62.3	52.7	56.7
115°	20.8	24.0	31.2	24.8	21.6
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)