

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: P294460

Luminaire Tested: **BMK-18-WFL-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: P294460
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-18-WFL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE FROSTED 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: 19827.0 lumens
Efficiency: N/A
Efficacy: 174.2 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

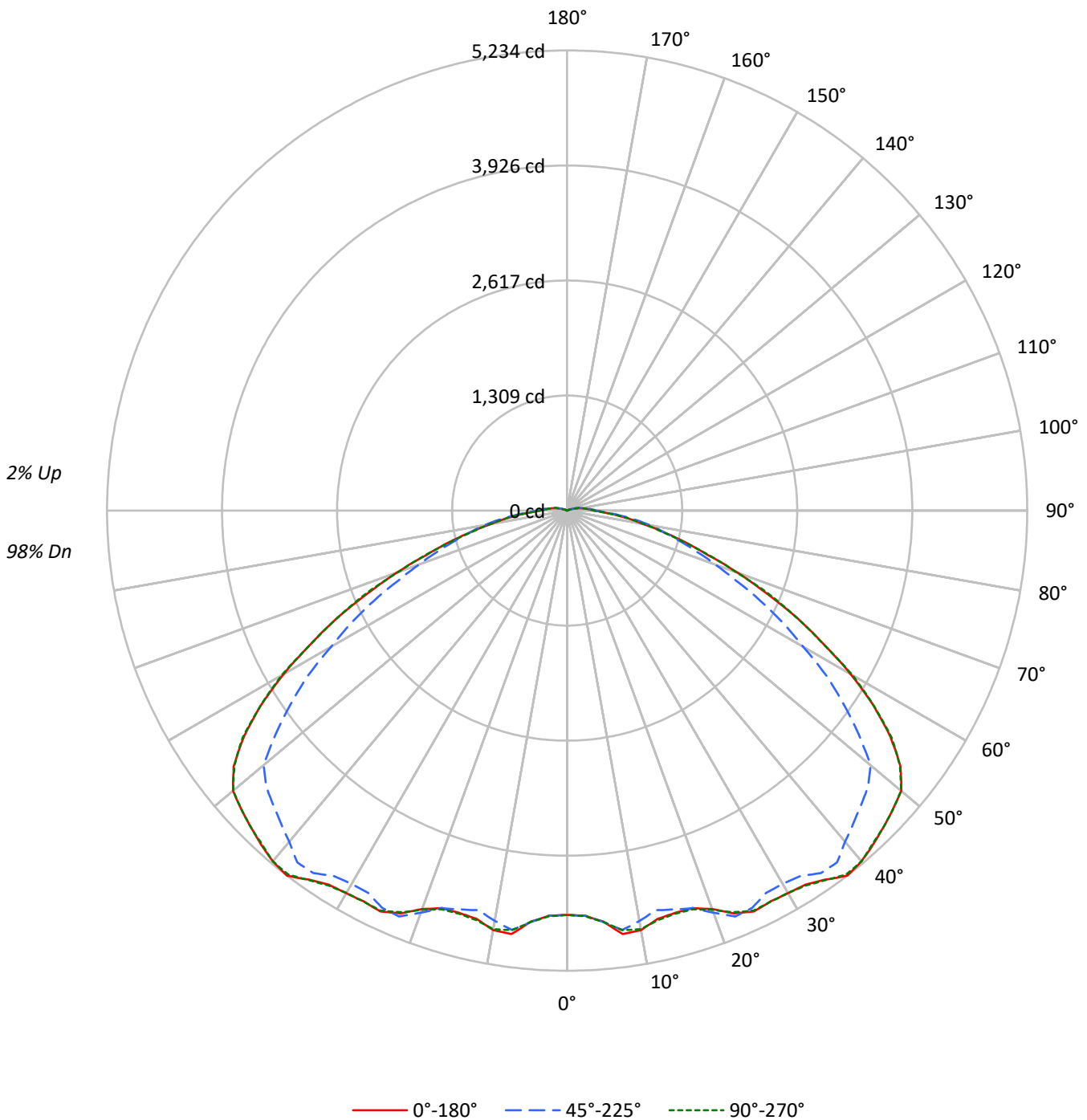
Input Watts (W): 113.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	35455	35455	35455
5°	35934	35959	35955
10°	37141	36337	37054
15°	36638	36325	36709
20°	37913	38270	37986
25°	40528	40158	40449
30°	41850	40822	41805
35°	44501	43708	44544
40°	47644	44989	47634
45°	49574	46072	49580
50°	52087	47302	52059
55°	51556	44087	51757
60°	47638	39656	47903
65°	41879	35212	41839
70°	34974	30399	34741
75°	28618	27153	28020
80°	23281	25102	23569
85°	20344	22125	20651



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	453.4	2.3
10°-20°	1342.2	6.8
20°-30°	2283.0	11.5
30°-40°	3179.5	16.0
40°-50°	3804.6	19.2
50°-60°	3699.7	18.7
60°-70°	2624.7	13.2
70°-80°	1429.3	7.2
80°-90°	626.5	3.2
90°-100°	260.3	1.3
100°-110°	106.9	0.5
110°-120°	16.4	0.1
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°	4078.6	20.6
0°-40°	7258.2	36.6
0°-60°	14762.5	74.5
0°-90°	19443.0	98.1
90°-120°	383.6	1.9
90°-150°	384.0	1.9
90°-180°	384.0	1.9
0°-180°	19827.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4599	4599	4599	4599	4599	
5°	4692	4684	4695	4686	4695	456
15°	4737	4677	4697	4668	4747	1351
25°	5030	4900	4984	4905	5020	2308
35°	5124	5128	5032	5111	5129	3226
45°	5090	4924	4730	4930	5090	3938
55°	4490	4153	3839	4161	4507	3970
65°	2884	2633	2424	2636	2881	2846
75°	1389	1301	1318	1305	1360	1488
85°	544	543	591	547	552	514
90°	303	327	334	326	307	174
95°	222	233	250	236	225	168
105°	97	98	96	98	97	105
115°	9	12	14	12	9	15
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°	4599.1	4599.1	4599.1	4599.1	4599.1
2.5°	4610.6	4607.9	4611.2	4612.3	4617.2
5°	4692.0	4684.4	4695.3	4686.0	4694.8
7.5°	4858.7	4820.5	4811.2	4808.5	4812.8
10°	4844.5	4817.2	4739.6	4816.1	4833.1
12.5°	4756.5	4728.1	4655.4	4725.4	4772.4
15°	4737.4	4677.3	4697.0	4668.5	4746.7
17.5°	4740.1	4686.6	4741.2	4682.2	4754.9
20°	4822.1	4787.7	4867.5	4783.9	4831.4
22.5°	4958.8	4898.6	4997.0	4880.1	4945.6
25°	5029.8	4899.7	4983.9	4904.7	5020.0
27.5°	5011.2	4924.9	4901.4	4924.3	5014.0
30°	5025.4	4976.8	4901.9	4968.6	5020.0
32.5°	5044.0	5015.1	4930.3	5011.8	5055.0
35°	5123.8	5127.6	5032.5	5111.2	5128.7
37.5°	5234.2	5113.4	5042.9	5105.2	5216.7
40°	5208.5	5046.2	4918.3	5045.7	5207.4
42.5°	5151.7	5001.9	4819.9	5004.1	5142.4
45°	5089.9	4924.3	4730.3	4930.3	5090.5
47.5°	5027.1	4894.8	4642.3	4888.8	5027.1
50°	4960.9	4724.8	4505.1	4725.9	4958.2
52.5°	4781.1	4476.7	4178.3	4476.7	4772.4
55°	4489.8	4153.2	3839.4	4161.4	4507.3
57.5°	4134.6	3837.8	3496.8	3834.0	4138.9
60°	3728.5	3423.0	3103.8	3444.8	3749.3
62.5°	3287.4	3069.9	2767.7	3050.8	3284.7
65°	2883.5	2633.2	2424.5	2636.0	2880.8
67.5°	2447.4	2249.6	2077.9	2246.3	2486.8
70°	2060.5	1895.4	1791.0	1895.4	2046.8
72.5°	1677.3	1593.7	1541.2	1590.4	1695.9
75°	1388.8	1300.8	1317.7	1305.1	1359.8
77.5°	1108.9	1065.2	1128.1	1065.8	1101.8
80°	879.4	870.1	948.2	867.4	890.3
82.5°	705.0	694.7	768.4	691.4	712.7
85°	543.8	542.7	591.4	547.1	552.0
87.5°	401.7	415.9	438.3	418.1	402.3
90°	303.3	326.8	333.9	326.3	307.2
92.5°	259.6	275.5	285.8	274.9	264.0
95°	221.9	233.4	249.8	236.1	224.6
97.5°	188.0	198.9	210.4	198.9	189.6
100°	156.3	164.0	174.9	165.1	158.0
102.5°	129.0	130.6	136.1	132.8	128.4
105°	96.7	97.8	96.2	98.4	97.3
107.5°	70.0	68.9	64.5	70.5	69.4
110°	43.7	43.7	42.6	44.3	43.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	23.0	24.6	26.8	24.6	24.0
115°	8.7	12.0	14.2	11.5	9.3
117.5°	3.8	5.5	6.0	5.5	3.8
120°	3.3	3.8	3.3	3.3	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)