

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: P381677

Luminaire Tested: **BMK-50-NFL-UNV-L750-CD-U**

Issue Date: 2/4/2020

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: P381677
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-4)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-50-NFL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH NARROW FROSTED LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 53003.2 lumens
Efficiency: N/A
Efficacy: 159.4 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.1
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

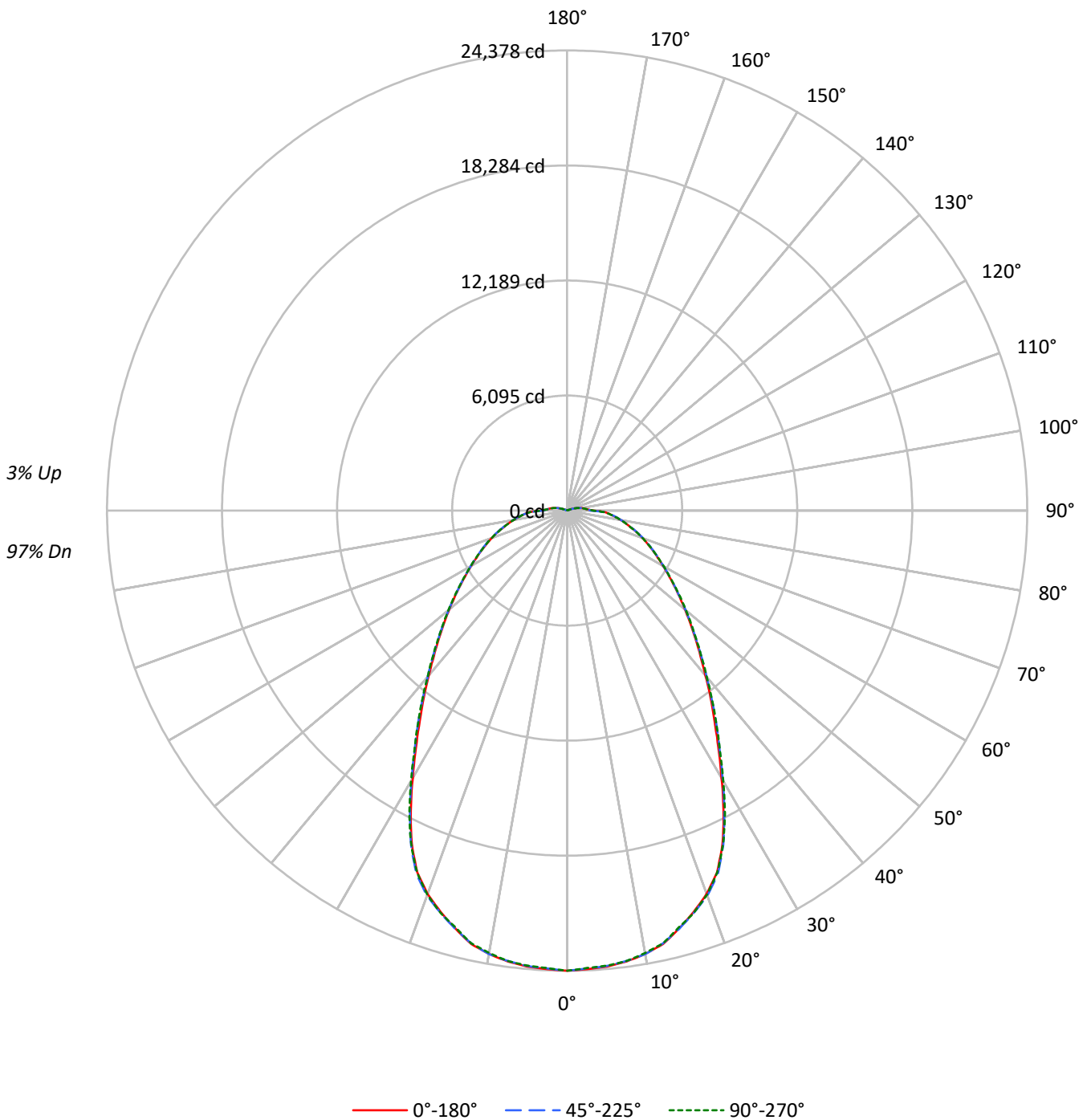
Input Watts (W): 332.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	99	99	99	97	
1	107	102	98	94	104	100	96	92	95	91	88	90	88	85	86	84	82	86	84	82	80	
2	98	90	83	77	95	88	81	76	84	78	74	80	75	72	76	73	70	76	73	70	67	
3	90	80	72	65	87	78	70	65	74	68	63	71	66	61	68	64	60	68	64	60	58	
4	83	71	63	56	80	70	62	56	67	60	55	64	58	54	62	57	52	62	57	52	50	
5	77	64	56	49	75	63	55	49	61	54	48	58	52	47	56	51	46	56	51	46	44	
6	71	59	50	44	69	57	49	43	55	48	43	53	47	42	51	46	42	51	46	42	39	
7	67	54	45	39	65	53	45	39	51	44	38	49	43	38	47	42	37	47	42	37	36	
8	62	49	41	35	61	48	41	35	47	40	35	45	39	34	44	38	34	44	38	34	32	
9	58	46	38	32	57	45	37	32	43	37	32	42	36	31	41	35	31	41	35	31	29	
10	55	42	35	30	54	42	34	30	40	34	29	39	33	29	38	33	29	38	33	29	27	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	188026	188026	188026
5°	185833	185569	185391
10°	182915	183000	182515
15°	177330	177468	176875
20°	169983	170776	170314
25°	156991	157760	157573
30°	136268	137239	137691
35°	118164	119629	119707
40°	104261	105124	105307
45°	93633	94293	94433
50°	85522	85954	86257
55°	79336	79680	79834
60°	74932	75344	75570
65°	72750	73218	72944
70°	72270	72629	72196
75°	72554	73308	72622
80°	76348	77023	76202
85°	86299	86842	85884



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2299.7	4.3
10°-20°	6449.0	12.2
20°-30°	8881.7	16.8
30°-40°	8613.1	16.3
40°-50°	7495.4	14.1
50°-60°	6235.2	11.8
60°-70°	5004.7	9.4
70°-80°	3756.8	7.1
80°-90°	2453.2	4.6
90°-100°	1108.2	2.1
100°-110°	525.9	1.0
110°-120°	84.4	0.2
120°-130°	23.4	0.0
130°-140°	26.1	0.0
140°-150°	22.7	0.0
150°-160°	13.1	0.0
160°-170°	8.0	0.0
170°-180°	2.7	0.0
0°-30°	17630.4	33.3
0°-40°	26243.5	49.5
0°-60°	39974.1	75.4
0°-90°	51188.7	96.6
90°-120°	1718.4	3.2
90°-150°	1790.6	3.4
90°-180°	1814.0	3.4
0°-180°	53003.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	24378	24378	24378	24378	24378	
5°	24253	24173	24218	24258	24195	###
15°	22918	22842	22936	22953	22860	6447
25°	19474	19473	19570	19602	19546	8853
35°	13599	13643	13767	13767	13776	8551
45°	9609	9649	9677	9691	9691	7452
55°	6906	6919	6936	6952	6949	6208
65°	5007	5021	5039	5041	5020	4978
75°	3520	3540	3556	3541	3523	3747
85°	2306	2326	2320	2290	2295	2001
90°	1408	1362	1249	1340	1370	817
95°	1007	1010	1007	986	993	774
105°	505	501	498	491	490	533
115°	60	59	59	57	56	86
125°	26	27	26	27	28	23
135°	33	34	33	34	34	26
145°	38	37	37	37	37	23
155°	27	28	27	27	27	13
165°	29	29	28	28	28	8
175°	28	29	28	29	29	3
180°	29	29	29	29	29	



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CATALOG NUMBER: BMK-50-NFL-UNV-L750-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	24378.0	24378.0	24378.0	24378.0	24378.0
2.5°	24317.0	24251.6	24276.0	24318.1	24254.9
5°	24252.7	24172.8	24218.3	24258.3	24195.0
7.5°	24094.1	24012.0	24068.6	24132.9	24068.6
10°	23846.7	23772.4	23857.8	23865.6	23794.6
12.5°	23514.0	23431.9	23478.5	23507.3	23480.7
15°	22918.3	22841.8	22936.1	22952.7	22859.5
17.5°	22289.4	22262.8	22332.7	22372.6	22337.1
20°	21609.5	21628.3	21710.4	21719.3	21651.6
22.5°	20742.1	20726.6	20845.2	20830.8	20769.8
25°	19474.3	19473.2	19569.7	19601.8	19546.4
27.5°	17939.1	17902.5	18041.2	18041.2	18108.8
30°	16355.2	16333.0	16471.7	16480.5	16526.0
32.5°	14897.7	14935.4	15041.9	15065.2	15061.9
35°	13598.8	13643.2	13767.4	13767.4	13776.3
37.5°	12463.0	12497.4	12571.7	12610.5	12593.9
40°	11392.6	11438.1	11486.9	11531.3	11506.9
42.5°	10447.6	10475.3	10549.6	10579.6	10548.5
45°	9609.0	9649.0	9676.7	9691.1	9691.1
47.5°	8843.7	8850.3	8899.1	8900.2	8915.8
50°	8141.5	8123.8	8182.6	8165.9	8211.4
52.5°	7498.2	7501.5	7525.9	7535.9	7567.0
55°	6905.9	6919.2	6935.8	6952.5	6949.2
57.5°	6361.3	6382.3	6405.6	6417.8	6399.0
60°	5862.1	5901.0	5894.3	5923.1	5912.0
62.5°	5415.1	5451.7	5455.1	5469.5	5453.9
65°	5006.9	5021.4	5039.1	5041.3	5020.2
67.5°	4620.9	4634.2	4659.8	4654.2	4626.5
70°	4256.0	4261.6	4277.1	4279.3	4251.6
72.5°	3893.3	3896.6	3907.7	3905.5	3886.6
75°	3519.5	3539.5	3556.1	3540.6	3522.8
77.5°	3205.6	3207.8	3220.0	3196.7	3200.0
80°	2882.8	2896.1	2908.3	2872.8	2877.3
82.5°	2594.4	2608.8	2616.6	2573.3	2578.9
85°	2306.0	2326.0	2320.5	2290.5	2294.9
87.5°	2015.4	1993.2	1977.7	1965.5	1971.1
90°	1407.6	1362.1	1249.0	1339.9	1369.9
92.5°	1129.2	1145.8	1130.3	1112.5	1129.2
95°	1007.2	1010.5	1007.2	986.1	992.7
97.5°	888.5	897.3	888.5	867.4	875.2
100°	763.1	765.3	759.8	746.5	752.0
102.5°	637.8	640.0	632.2	623.4	625.6
105°	504.7	501.4	498.0	491.4	490.3
107.5°	363.8	363.8	358.3	351.6	356.1
110°	238.5	235.2	222.9	225.2	227.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	126.4	127.6	129.8	123.1	118.7
115°	59.9	58.8	58.8	56.6	55.5
117.5°	26.6	26.6	24.4	25.5	26.6
120°	21.1	22.2	21.1	21.1	23.3
122.5°	23.3	24.4	23.3	24.4	25.5
125°	25.5	26.6	25.5	26.6	27.7
127.5°	27.7	28.8	27.7	28.8	28.8
130°	29.9	31.1	29.9	29.9	31.1
132.5°	31.1	32.2	32.2	32.2	32.2
135°	33.3	34.4	33.3	34.4	34.4
137.5°	35.5	35.5	35.5	35.5	35.5
140°	36.6	36.6	36.6	36.6	36.6
142.5°	37.7	37.7	37.7	37.7	36.6
145°	37.7	36.6	36.6	36.6	36.6
147.5°	35.5	35.5	35.5	35.5	34.4
150°	32.2	32.2	32.2	32.2	32.2
152.5°	28.8	29.9	28.8	28.8	28.8
155°	26.6	27.7	26.6	26.6	26.6
157.5°	27.7	27.7	26.6	26.6	27.7
160°	27.7	27.7	27.7	27.7	27.7
162.5°	28.8	28.8	27.7	27.7	27.7
165°	28.8	28.8	27.7	27.7	27.7
167.5°	28.8	28.8	27.7	27.7	27.7
170°	28.8	28.8	27.7	27.7	27.7
172.5°	28.8	28.8	28.8	28.8	28.8
175°	27.7	28.8	27.7	28.8	28.8
177.5°	27.7	27.7	27.7	28.8	29.9
180°	28.8	28.8	28.8	28.8	28.8

(END OF REPORT)