

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: P294538

Luminaire Tested: **BMK-24-NFL-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: P294538
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-103-7)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-24-NFL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH NARROW FROSTED LENS
Light Source: (528) 70 CRI 5000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

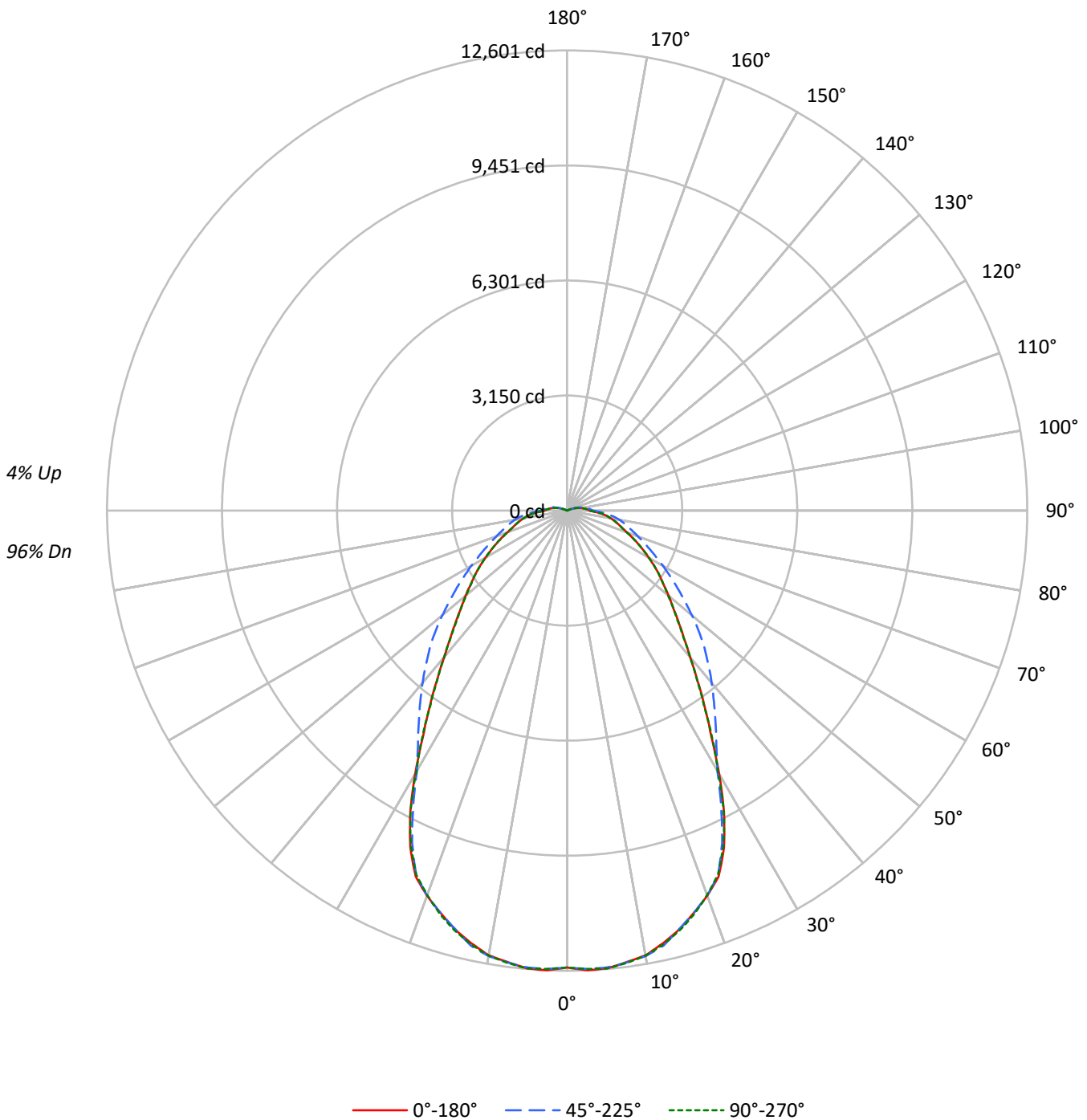
Lumens per Lamp: N/A
Luminaire Lumens: 26206.0 lumens
Efficiency: N/A
Efficacy: 168.5 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.11
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

Input Watts (W): 155.5
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	108	103	98	95	105	100	96	93	95	92	89	91	88	86	87	84	82	80
2	99	91	84	78	96	88	82	77	84	79	75	80	76	72	77	73	70	68
3	91	80	73	66	88	79	71	66	75	69	64	72	67	62	69	65	61	59
4	84	72	64	57	81	71	63	57	68	61	56	65	59	55	62	58	53	51
5	77	65	57	50	75	64	56	50	61	55	49	59	53	48	57	52	47	45
6	72	59	51	45	70	58	50	45	56	49	44	54	48	43	52	47	43	41
7	67	54	46	40	65	53	46	40	52	45	40	50	44	39	48	43	38	37
8	63	50	42	37	61	49	42	36	48	41	36	46	40	35	45	39	35	33
9	59	46	39	33	58	46	38	33	44	38	33	43	37	32	42	36	32	30
10	56	43	36	31	54	42	35	30	41	35	30	40	34	30	39	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	96443	96443	96443
5°	96367	96198	96367
10°	94804	94979	94853
15°	91814	91710	92073
20°	88250	88177	88065
25°	81915	80912	81583
30°	69321	68479	68871
35°	57049	61530	56883
40°	47868	56356	47920
45°	42006	51792	41688
50°	38141	46800	37879
55°	35389	42310	35372
60°	32966	38749	33048
65°	31108	36120	30932
70°	29530	34977	29410
75°	29912	35675	29926
80°	32081	38561	32099
85°	35113	41795	35540



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1191.4	4.5
10°-20°	3337.7	12.7
20°-30°	4562.8	17.4
30°-40°	4285.7	16.4
40°-50°	3695.2	14.1
50°-60°	3031.9	11.6
60°-70°	2336.1	8.9
70°-80°	1711.7	6.5
80°-90°	1096.9	4.2
90°-100°	593.1	2.3
100°-110°	307.2	1.2
110°-120°	55.5	0.2
120°-130°	0.9	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°	9091.9	34.7
0°-40°	13377.6	51.0
0°-60°	20104.7	76.7
0°-90°	25249.4	96.3
90°-120°	955.8	3.6
90°-150°	956.6	3.7
90°-180°	957.0	3.7
0°-180°	26206.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12510	12510	12510	12510	12510	
5°	12583	12574	12561	12555	12583	###
15°	11872	11845	11858	11851	11906	3339
25°	10166	10055	10042	10016	10125	4599
35°	6569	6804	7084	6789	6549	4133
45°	4313	4735	5318	4720	4280	3353
55°	3082	3369	3685	3366	3080	2761
65°	2142	2381	2487	2376	2130	2126
75°	1452	1633	1731	1628	1452	1541
85°	939	1006	1117	1003	950	821
90°	609	657	702	665	608	350
95°	516	530	598	529	516	398
105°	278	282	329	283	280	290
115°	31	41	53	42	32	48
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°	12510.3	12510.3	12510.3	12510.3	12510.3
2.5°	12601.4	12577.9	12565.1	12550.9	12563.0
5°	12582.9	12574.3	12560.8	12555.1	12582.9
7.5°	12471.9	12464.0	12481.8	12451.9	12493.9
10°	12365.8	12340.2	12388.6	12288.3	12372.2
12.5°	12133.2	12150.9	12202.2	12131.0	12163.8
15°	11872.0	11845.0	11858.5	11851.4	11905.5
17.5°	11546.1	11529.0	11544.7	11526.2	11583.1
20°	11224.5	11203.1	11215.2	11204.5	11201.0
22.5°	10843.1	10774.7	10802.5	10726.4	10793.3
25°	10166.3	10054.6	10041.8	10015.5	10125.1
27.5°	9304.6	9193.6	9131.0	9158.0	9291.1
30°	8324.1	8317.7	8223.0	8284.9	8270.0
32.5°	7350.6	7537.8	7599.0	7534.2	7394.0
35°	6568.6	6804.1	7084.5	6789.2	6549.4
37.5°	5858.4	6192.9	6602.0	6162.3	5839.9
40°	5233.0	5640.0	6160.9	5612.2	5238.7
42.5°	4727.7	5157.5	5720.4	5150.4	4722.0
45°	4312.9	4734.9	5317.6	4719.9	4280.2
47.5°	3932.9	4357.7	4893.5	4349.9	3932.2
50°	3632.6	3980.6	4457.3	3979.9	3607.7
52.5°	3332.3	3661.1	4047.5	3667.5	3319.5
55°	3081.9	3368.6	3684.6	3365.8	3080.4
57.5°	2830.7	3104.6	3340.9	3101.1	2834.2
60°	2580.2	2846.3	3032.8	2838.5	2586.6
62.5°	2351.1	2610.8	2737.4	2597.3	2356.8
65°	2141.9	2380.9	2487.0	2376.0	2129.8
67.5°	1934.1	2169.6	2265.7	2171.7	1927.7
70°	1739.8	1981.0	2060.7	1978.2	1732.7
72.5°	1580.4	1807.4	1886.4	1801.0	1580.4
75°	1451.6	1633.1	1731.3	1628.1	1452.3
77.5°	1327.1	1475.1	1593.2	1470.8	1337.1
80°	1211.8	1326.4	1456.6	1313.6	1212.5
82.5°	1090.9	1165.6	1295.1	1159.9	1096.5
85°	938.6	1006.2	1117.2	1002.6	950.0
87.5°	760.7	838.2	900.9	838.2	770.6
90°	609.1	656.8	702.3	664.6	608.4
92.5°	577.1	592.7	651.8	594.9	578.5
95°	515.9	530.1	598.4	529.4	515.9
97.5°	458.3	471.8	540.8	469.6	455.4
100°	397.1	409.2	475.3	412.7	394.9
102.5°	341.6	350.8	407.0	351.5	340.8
105°	278.2	281.8	328.8	283.2	279.7
107.5°	206.4	210.6	234.8	213.5	209.9
110°	138.0	141.6	158.0	144.5	141.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	78.3	82.5	103.2	83.3	76.9
115°	31.3	41.3	53.4	42.0	32.0
117.5°	8.5	15.7	19.2	15.7	9.3
120°	7.1	7.8	7.1	7.8	6.4
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)