

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: P294520

Luminaire Tested: **BMK-12-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: P294520
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-12-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

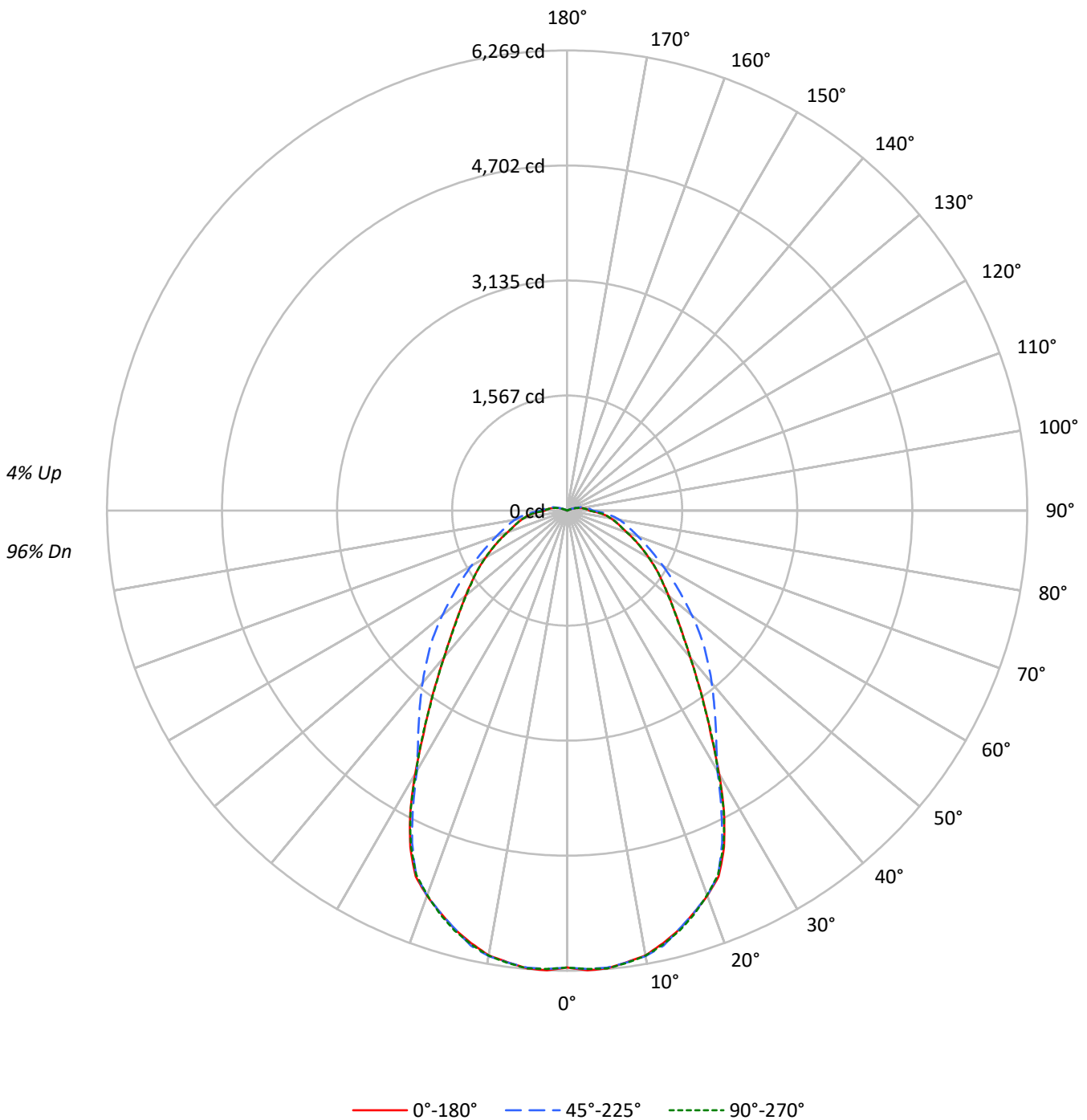
Lumens per Lamp: N/A
Luminaire Lumens: 13038.0 lumens
Efficiency: N/A
Efficacy: 175.5 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.11
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

Input Watts (W): 74.3
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	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°	47982	47982	47982
5°	47944	47861	47944
10°	47167	47254	47191
15°	45680	45627	45808
20°	43906	43870	43814
25°	40755	40255	40589
30°	34489	34070	34265
35°	28383	30613	28300
40°	23815	28038	23841
45°	20898	25767	20741
50°	18976	23284	18846
55°	17607	21049	17599
60°	16401	19279	16442
65°	15476	17970	15389
70°	14692	17403	14633
75°	14882	17748	14890
80°	15961	19185	15971
85°	17471	20793	17680



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	592.8	4.5
10°-20°	1660.6	12.7
20°-30°	2270.1	17.4
30°-40°	2132.2	16.4
40°-50°	1838.4	14.1
50°-60°	1508.4	11.6
60°-70°	1162.3	8.9
70°-80°	851.6	6.5
80°-90°	545.7	4.2
90°-100°	295.1	2.3
100°-110°	152.8	1.2
110°-120°	27.6	0.2
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°	4523.4	34.7
0°-40°	6655.6	51.0
0°-60°	10002.5	76.7
0°-90°	12562.0	96.3
90°-120°	475.5	3.6
90°-150°	476.0	3.7
90°-180°	476.0	3.7
0°-180°	13038.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6224	6224	6224	6224	6224	
5°	6260	6256	6249	6246	6260	593
15°	5907	5893	5900	5896	5923	1661
25°	5058	5002	4996	4983	5037	2288
35°	3268	3385	3525	3378	3258	2056
45°	2146	2356	2646	2348	2130	1668
55°	1533	1676	1833	1674	1533	1374
65°	1066	1185	1237	1182	1060	1058
75°	722	812	861	810	723	767
85°	467	501	556	499	473	408
90°	303	327	349	331	303	174
95°	257	264	298	263	257	198
105°	138	140	164	141	139	144
115°	16	20	27	21	16	24
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°	6224.1	6224.1	6224.1	6224.1	6224.1
2.5°	6269.4	6257.7	6251.4	6244.3	6250.3
5°	6260.2	6256.0	6249.3	6246.4	6260.2
7.5°	6205.0	6201.1	6210.0	6195.1	6216.0
10°	6152.2	6139.5	6163.6	6113.7	6155.4
12.5°	6036.5	6045.3	6070.8	6035.4	6051.7
15°	5906.6	5893.1	5899.8	5896.3	5923.2
17.5°	5744.4	5735.9	5743.7	5734.5	5762.8
20°	5584.4	5573.8	5579.8	5574.5	5572.7
22.5°	5394.6	5360.6	5374.5	5336.6	5369.9
25°	5058.0	5002.4	4996.0	4982.9	5037.4
27.5°	4629.2	4574.0	4542.9	4556.3	4622.5
30°	4141.4	4138.2	4091.1	4121.9	4114.5
32.5°	3657.1	3750.2	3780.6	3748.4	3678.7
35°	3268.0	3385.2	3524.7	3377.8	3258.4
37.5°	2914.7	3081.1	3284.6	3065.9	2905.5
40°	2603.5	2806.0	3065.2	2792.2	2606.3
42.5°	2352.1	2566.0	2846.0	2562.4	2349.3
45°	2145.7	2355.7	2645.6	2348.2	2129.5
47.5°	1956.7	2168.1	2434.6	2164.2	1956.3
50°	1807.3	1980.4	2217.6	1980.1	1794.9
52.5°	1657.9	1821.5	2013.7	1824.6	1651.5
55°	1533.3	1676.0	1833.1	1674.5	1532.6
57.5°	1408.3	1544.6	1662.1	1542.8	1410.1
60°	1283.7	1416.1	1508.9	1412.2	1286.9
62.5°	1169.7	1298.9	1361.9	1292.2	1172.5
65°	1065.6	1184.6	1237.3	1182.1	1059.6
67.5°	962.2	1079.4	1127.2	1080.5	959.1
70°	865.6	985.6	1025.3	984.2	862.1
72.5°	786.3	899.2	938.5	896.0	786.3
75°	722.2	812.5	861.3	810.0	722.6
77.5°	660.3	733.9	792.7	731.8	665.2
80°	602.9	659.9	724.7	653.5	603.3
82.5°	542.7	579.9	644.3	577.1	545.6
85°	467.0	500.6	555.8	498.8	472.6
87.5°	378.5	417.0	448.2	417.0	383.4
90°	303.0	326.8	349.4	330.7	302.7
92.5°	287.1	294.9	324.3	296.0	287.8
95°	256.7	263.7	297.7	263.4	256.7
97.5°	228.0	234.7	269.1	233.7	226.6
100°	197.5	203.6	236.5	205.3	196.5
102.5°	169.9	174.5	202.5	174.9	169.6
105°	138.4	140.2	163.6	140.9	139.1
107.5°	102.7	104.8	116.8	106.2	104.4
110°	68.7	70.5	78.6	71.9	70.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	38.9	41.1	51.3	41.4	38.2
115°	15.6	20.5	26.6	20.9	15.9
117.5°	4.2	7.8	9.6	7.8	4.6
120°	3.5	3.9	3.5	3.9	3.2
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)