

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: P294568

Luminaire Tested: **BMK-18-NCL-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: P294568
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1903-198-7)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-18-NCL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH NARROW CLEAR LENS
Light Source: (528) 70 CRI 5000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

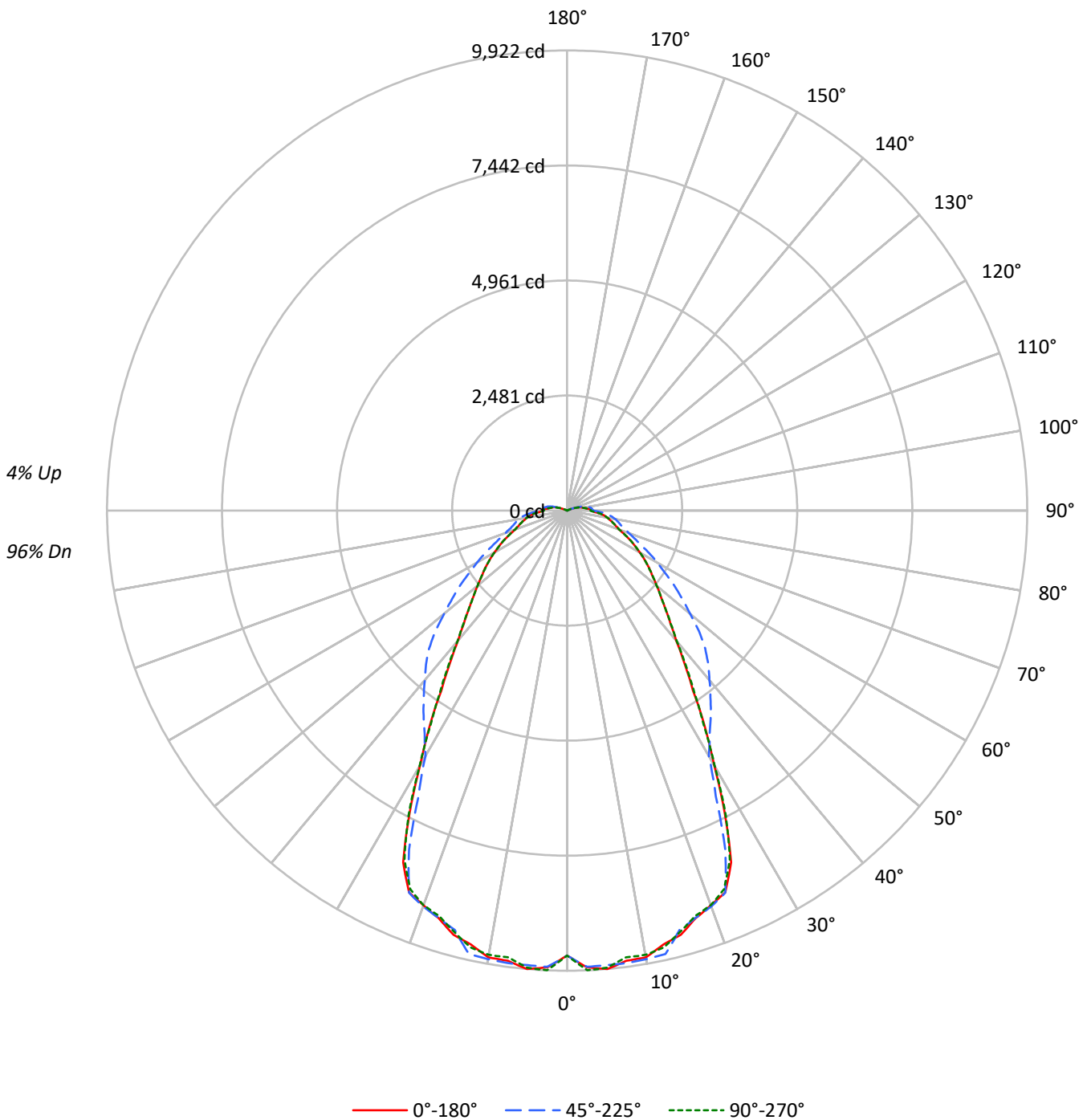
Lumens per Lamp: N/A
Luminaire Lumens: 19931.0 lumens
Efficiency: N/A
Efficacy: 175.1 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

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	50	30	10	0	
RCR																						
0	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96				
1	108	103	99	95	105	100	96	93	95	92	89	91	88	86	86	84	82	80				
2	99	91	84	79	96	89	83	78	84	79	75	81	76	73	77	74	71	68				
3	91	81	73	67	88	79	72	66	76	70	65	72	67	63	69	65	61	59				
4	84	73	65	58	82	71	64	58	68	62	56	65	60	55	63	58	54	52				
5	78	66	58	51	76	65	57	51	62	55	50	60	54	49	58	52	48	46				
6	73	60	52	46	71	59	51	45	57	50	45	55	49	44	53	48	43	41				
7	68	55	47	41	66	54	46	41	52	45	40	51	44	40	49	43	39	37				
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	45	40	36	34				
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	42	37	33	31				
10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	34	30	29				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	73973	73973	73973
5°	75991	75353	75778
10°	74981	75295	74580
15°	73223	72401	72755
20°	71215	71420	71189
25°	67413	64990	66860
30°	52796	50904	53028
35°	41095	46872	41449
40°	33504	43670	33623
45°	29163	40991	29178
50°	26479	36329	26496
55°	24792	32317	24661
60°	23158	28629	23158
65°	21672	25589	21672
70°	20307	24080	20278
75°	21150	24585	21082
80°	23236	27863	23191
85°	26292	31795	26232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	933.9	4.7
10°-20°	2654.6	13.3
20°-30°	3643.7	18.3
30°-40°	3194.8	16.0
40°-50°	2734.3	13.7
50°-60°	2214.3	11.1
60°-70°	1660.8	8.3
70°-80°	1209.7	6.1
80°-90°	828.1	4.2
90°-100°	511.9	2.6
100°-110°	297.2	1.5
110°-120°	47.0	0.2
120°-130°	0.7	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°	7232.3	36.3
0°-40°	10427.1	52.3
0°-60°	15375.6	77.1
0°-90°	19074.3	95.7
90°-120°	856.1	4.3
90°-150°	856.7	4.3
90°-180°	857.0	4.3
0°-180°	19931.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9596	9596	9596	9596	9596	
5°	9922	9831	9839	9859	9895	938
15°	9468	9373	9362	9362	9408	2660
25°	8366	8053	8066	8066	8298	3702
35°	4732	5006	5397	5049	4772	3014
45°	2994	3486	4209	3457	2996	2334
55°	2159	2456	2814	2458	2148	1929
65°	1492	1710	1762	1701	1492	1480
75°	1026	1165	1193	1159	1023	1087
85°	703	763	850	763	701	608
90°	516	536	562	526	502	293
95°	440	446	530	454	443	348
105°	273	280	350	275	270	276
115°	29	31	41	31	29	45
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°	9595.5	9595.5	9595.5	9595.5	9595.5
2.5°	9857.0	9786.7	9845.6	9884.8	9920.8
5°	9922.4	9830.9	9839.0	9858.6	9894.6
7.5°	9791.6	9693.6	9839.0	9767.1	9716.5
10°	9780.2	9621.7	9821.1	9688.7	9727.9
12.5°	9582.4	9566.1	9791.6	9629.8	9644.5
15°	9468.0	9373.2	9361.8	9361.8	9407.6
17.5°	9214.7	9157.5	9209.8	9182.0	9167.3
20°	9057.8	9031.6	9083.9	9110.1	9054.5
22.5°	8909.1	8781.6	8915.6	8804.5	8837.2
25°	8366.4	8052.6	8065.7	8065.7	8297.8
27.5°	7356.4	7173.3	6942.9	7199.5	7412.0
30°	6339.8	6393.7	6112.6	6382.3	6367.6
32.5°	5519.3	5671.3	5717.1	5677.9	5478.5
35°	4731.6	5006.1	5396.8	5048.6	4772.4
37.5°	4151.4	4528.9	5078.1	4520.7	4198.8
40°	3662.7	4112.1	4774.1	4131.7	3675.7
42.5°	3294.9	3788.5	4504.4	3768.9	3304.7
45°	2994.2	3486.2	4208.6	3456.7	2995.8
47.5°	2736.0	3206.7	3855.5	3208.3	2736.0
50°	2521.9	2904.3	3460.0	2902.7	2523.5
52.5°	2320.8	2677.1	3123.3	2657.5	2327.4
55°	2159.0	2456.5	2814.4	2458.1	2147.6
57.5°	1980.9	2255.5	2500.6	2252.2	1989.1
60°	1812.5	2057.7	2240.7	2039.7	1812.5
62.5°	1647.5	1877.9	1995.6	1879.5	1650.7
65°	1492.2	1709.6	1761.9	1701.4	1492.2
67.5°	1333.7	1546.1	1570.6	1536.3	1341.8
70°	1196.4	1408.8	1418.7	1394.1	1194.7
72.5°	1103.2	1274.8	1286.3	1278.1	1103.2
75°	1026.4	1165.3	1193.1	1158.8	1023.1
77.5°	946.3	1060.7	1124.5	1062.4	952.8
80°	877.7	962.7	1052.5	964.3	876.0
82.5°	805.8	869.5	969.2	872.8	812.3
85°	702.8	763.3	849.9	763.3	701.2
87.5°	572.0	647.2	701.2	642.3	562.2
90°	516.5	536.1	562.2	526.3	501.8
92.5°	531.2	501.8	545.9	498.5	509.9
95°	439.7	446.2	529.5	454.4	442.9
97.5°	397.2	415.1	503.4	407.0	395.5
100°	349.8	379.2	452.7	372.6	351.4
102.5°	318.7	338.3	415.1	343.2	323.6
105°	272.9	279.5	349.8	274.6	269.7
107.5°	204.3	204.3	230.4	205.9	201.0
110°	135.7	129.1	138.9	125.8	135.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	71.9	68.6	80.1	67.0	70.3
115°	29.4	31.1	40.9	31.1	29.4
117.5°	8.2	13.1	14.7	13.1	8.2
120°	4.9	6.5	4.9	6.5	4.9
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)