

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: P294562

Luminaire Tested: **BMK-15-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: P294562
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-15-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

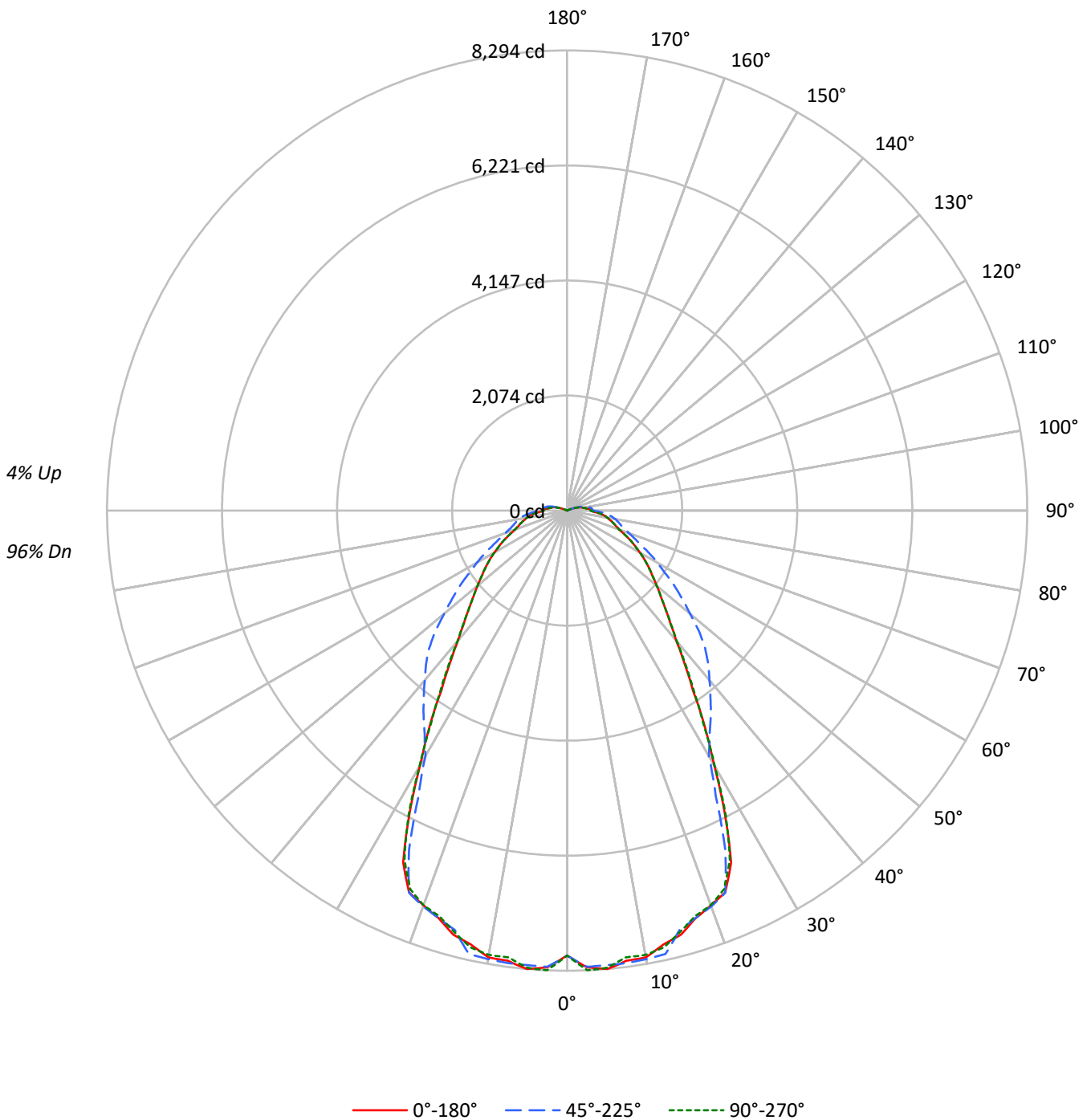
Lumens per Lamp: N/A
Luminaire Lumens: 16661.0 lumens
Efficiency: N/A
Efficacy: 177.6 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

Input Watts (W): 93.8
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	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°	61836	61836	61836
5°	63524	62990	63345
10°	62679	62942	62344
15°	61209	60522	60818
20°	59531	59703	59509
25°	56353	54327	55890
30°	44135	42552	44328
35°	34352	39181	34649
40°	28007	36505	28107
45°	24378	34265	24391
50°	22134	30368	22149
55°	20724	27016	20614
60°	19359	23932	19359
65°	18117	21390	18117
70°	16975	20129	16951
75°	17680	20552	17624
80°	19424	23294	19386
85°	21979	26576	21926



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	780.7	4.7
10°-20°	2219.1	13.3
20°-30°	3045.9	18.3
30°-40°	2670.6	16.0
40°-50°	2285.7	13.7
50°-60°	1851.0	11.1
60°-70°	1388.4	8.3
70°-80°	1011.2	6.1
80°-90°	692.2	4.2
90°-100°	427.9	2.6
100°-110°	248.4	1.5
110°-120°	39.3	0.2
120°-130°	0.6	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°	6045.7	36.3
0°-40°	8716.4	52.3
0°-60°	12853.0	77.1
0°-90°	15944.9	95.7
90°-120°	715.6	4.3
90°-150°	716.2	4.3
90°-180°	716.0	4.3
0°-180°	16661.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8021	8021	8021	8021	8021	
5°	8294	8218	8225	8241	8271	784
15°	7915	7835	7826	7826	7864	2224
25°	6994	6732	6742	6742	6936	3095
35°	3955	4185	4511	4220	3989	2520
45°	2503	2914	3518	2890	2504	1951
55°	1805	2054	2353	2055	1795	1613
65°	1247	1429	1473	1422	1247	1237
75°	858	974	997	969	855	908
85°	588	638	710	638	586	508
90°	432	448	470	440	419	245
95°	368	373	443	380	370	291
105°	228	234	292	230	225	230
115°	25	26	34	26	25	38
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°	8021.2	8021.2	8021.2	8021.2	8021.2
2.5°	8239.8	8181.1	8230.2	8263.0	8293.1
5°	8294.5	8218.0	8224.8	8241.2	8271.2
7.5°	8185.2	8103.2	8224.8	8164.7	8122.3
10°	8175.6	8043.1	8209.8	8099.1	8131.9
12.5°	8010.3	7996.6	8185.2	8049.9	8062.2
15°	7914.6	7835.4	7825.8	7825.8	7864.1
17.5°	7702.9	7655.1	7698.8	7675.6	7663.3
20°	7571.7	7549.9	7593.6	7615.4	7569.0
22.5°	7447.4	7340.8	7452.9	7360.0	7387.3
25°	6993.8	6731.5	6742.4	6742.4	6936.4
27.5°	6149.5	5996.4	5803.8	6018.3	6195.9
30°	5299.7	5344.7	5109.7	5335.2	5322.9
32.5°	4613.8	4740.9	4779.1	4746.3	4579.6
35°	3955.3	4184.8	4511.3	4220.3	3989.4
37.5°	3470.3	3785.9	4244.9	3779.0	3509.9
40°	3061.8	3437.5	3990.8	3453.9	3072.7
42.5°	2754.3	3167.0	3765.4	3150.6	2762.5
45°	2503.0	2914.2	3518.1	2889.6	2504.3
47.5°	2287.1	2680.6	3223.0	2681.9	2287.1
50°	2108.1	2427.8	2892.3	2426.4	2109.5
52.5°	1940.1	2237.9	2610.9	2221.5	1945.5
55°	1804.8	2053.5	2352.7	2054.8	1795.2
57.5°	1655.9	1885.4	2090.4	1882.7	1662.7
60°	1515.2	1720.1	1873.1	1705.1	1515.2
62.5°	1377.2	1569.8	1668.2	1571.2	1379.9
65°	1247.4	1429.1	1472.8	1422.3	1247.4
67.5°	1114.9	1292.5	1313.0	1284.3	1121.7
70°	1000.1	1177.7	1185.9	1165.4	998.7
72.5°	922.2	1065.7	1075.2	1068.4	922.2
75°	858.0	974.1	997.4	968.7	855.3
77.5°	791.1	886.7	940.0	888.1	796.5
80°	733.7	804.7	879.9	806.1	732.3
82.5°	673.6	726.8	810.2	729.6	679.0
85°	587.5	638.0	710.4	638.0	586.1
87.5°	478.2	541.0	586.1	536.9	470.0
90°	431.7	448.1	470.0	439.9	419.4
92.5°	444.0	419.4	456.3	416.7	426.3
95°	367.5	373.0	442.7	379.8	370.3
97.5°	332.0	347.0	420.8	340.2	330.6
100°	292.4	317.0	378.4	311.5	293.7
102.5°	266.4	282.8	347.0	286.9	270.5
105°	228.2	233.6	292.4	229.5	225.4
107.5°	170.8	170.8	192.6	172.1	168.0
110°	113.4	107.9	116.1	105.2	113.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	60.1	57.4	66.9	56.0	58.7
115°	24.6	26.0	34.2	26.0	24.6
117.5°	6.8	10.9	12.3	10.9	6.8
120°	4.1	5.5	4.1	5.5	4.1
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)