

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: P294526

Luminaire Tested: **BMK-15-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: P294526
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-15-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

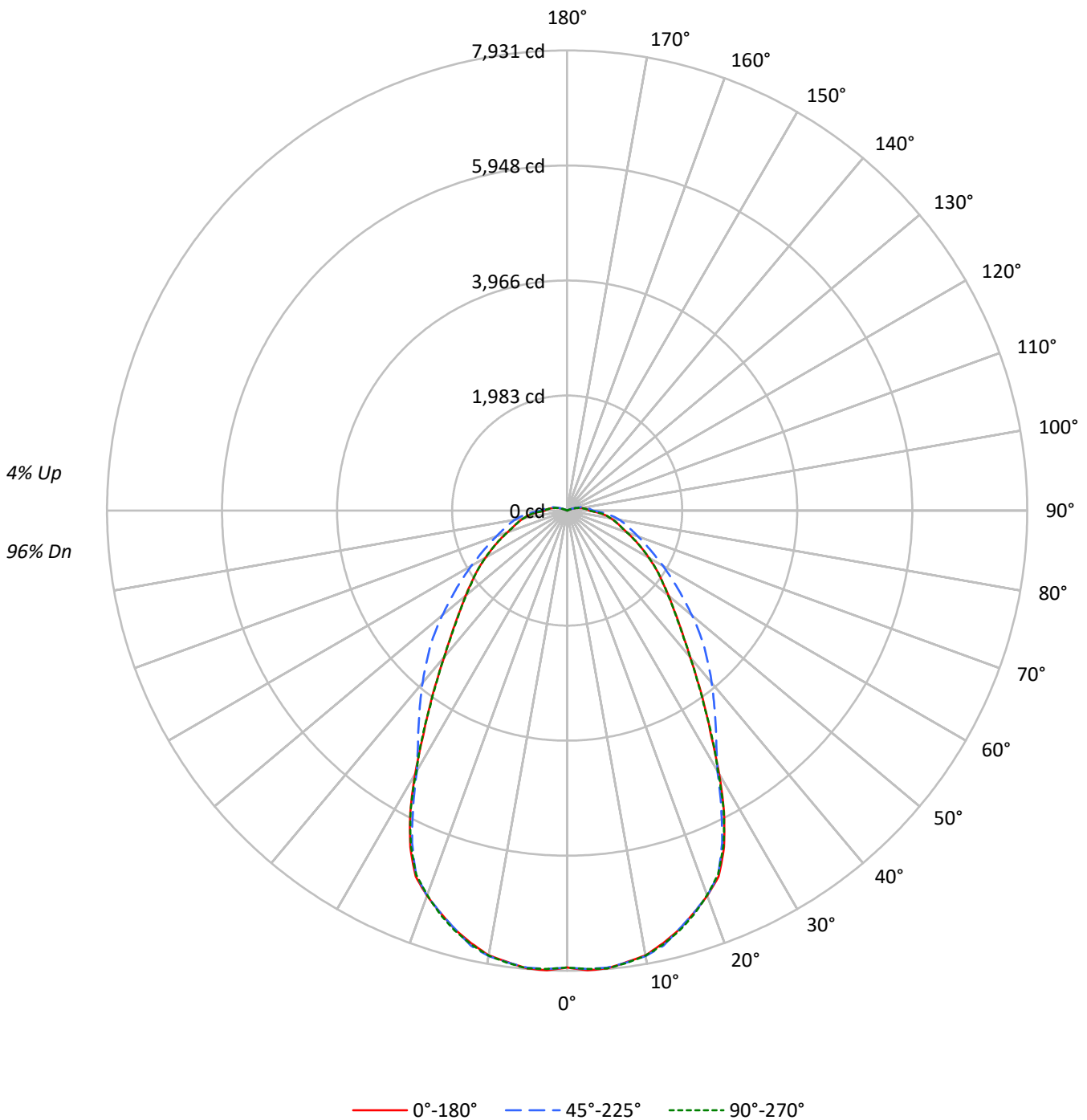
Lumens per Lamp: N/A
Luminaire Lumens: 16494.0 lumens
Efficiency: N/A
Efficacy: 175.8 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.11
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

Input Watts (W): 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	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°	60701	60701	60701
5°	60653	60547	60653
10°	59670	59780	59701
15°	57788	57722	57951
20°	55545	55498	55428
25°	51558	50926	51348
30°	43630	43101	43347
35°	35907	38727	35802
40°	30128	35470	30160
45°	26438	32598	26238
50°	24006	29456	23841
55°	22273	26630	22263
60°	20749	24388	20800
65°	19579	22734	19469
70°	18586	22014	18511
75°	18826	22454	18836
80°	20191	24271	20205
85°	22098	26307	22368



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	749.9	4.5
10°-20°	2100.7	12.7
20°-30°	2871.8	17.4
30°-40°	2697.4	16.4
40°-50°	2325.7	14.1
50°-60°	1908.3	11.6
60°-70°	1470.3	8.9
70°-80°	1077.3	6.5
80°-90°	690.4	4.2
90°-100°	373.3	2.3
100°-110°	193.3	1.2
110°-120°	35.0	0.2
120°-130°	0.5	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°	5722.4	34.7
0°-40°	8419.9	51.0
0°-60°	12653.8	76.7
0°-90°	15891.9	96.3
90°-120°	601.6	3.6
90°-150°	602.1	3.7
90°-180°	602.0	3.6
0°-180°	16494.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7874	7874	7874	7874	7874	
5°	7920	7914	7906	7902	7920	751
15°	7472	7455	7464	7459	7493	2101
25°	6399	6328	6320	6304	6373	2894
35°	4134	4282	4459	4273	4122	2601
45°	2714	2980	3347	2971	2694	2110
55°	1940	2120	2319	2118	1939	1738
65°	1348	1499	1565	1495	1340	1338
75°	914	1028	1090	1025	914	970
85°	591	633	703	631	598	517
90°	383	413	442	418	383	220
95°	325	334	377	333	325	251
105°	175	177	207	178	176	183
115°	20	26	34	26	20	30
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°	7874.0	7874.0	7874.0	7874.0	7874.0
2.5°	7931.3	7916.5	7908.4	7899.5	7907.1
5°	7919.6	7914.3	7905.8	7902.2	7919.6
7.5°	7849.8	7844.8	7856.0	7837.2	7863.7
10°	7783.0	7766.9	7797.4	7734.2	7787.1
12.5°	7636.6	7647.8	7680.0	7635.2	7655.8
15°	7472.2	7455.2	7463.7	7459.2	7493.3
17.5°	7267.1	7256.3	7266.2	7254.6	7290.4
20°	7064.7	7051.2	7058.8	7052.1	7049.9
22.5°	6824.6	6781.6	6799.1	6751.1	6793.2
25°	6398.7	6328.4	6320.3	6303.7	6372.7
27.5°	5856.3	5786.4	5747.0	5764.0	5847.8
30°	5239.1	5235.1	5175.6	5214.5	5205.1
32.5°	4626.5	4744.3	4782.8	4742.0	4653.8
35°	4134.3	4282.5	4459.0	4273.1	4122.2
37.5°	3687.3	3897.8	4155.3	3878.5	3675.6
40°	3293.6	3549.8	3877.6	3532.3	3297.2
42.5°	2975.6	3246.1	3600.4	3241.7	2972.0
45°	2714.5	2980.1	3346.9	2970.7	2693.9
47.5°	2475.4	2742.7	3080.0	2737.8	2474.9
50°	2286.4	2505.4	2805.4	2504.9	2270.7
52.5°	2097.4	2304.3	2547.5	2308.3	2089.3
55°	1939.7	2120.2	2319.1	2118.4	1938.8
57.5°	1781.6	1954.0	2102.7	1951.8	1783.9
60°	1624.0	1791.5	1908.8	1786.5	1628.0
62.5°	1479.8	1643.2	1722.9	1634.7	1483.3
65°	1348.1	1498.6	1565.3	1495.4	1340.5
67.5°	1217.3	1365.5	1426.0	1366.9	1213.3
70°	1095.0	1246.9	1297.0	1245.1	1090.6
72.5°	994.7	1137.6	1187.3	1133.6	994.7
75°	913.6	1027.9	1089.7	1024.7	914.1
77.5°	835.3	928.4	1002.8	925.7	841.5
80°	762.7	834.8	916.8	826.8	763.2
82.5°	686.6	733.6	815.1	730.0	690.2
85°	590.7	633.3	703.2	631.0	597.9
87.5°	478.8	527.6	567.0	527.6	485.0
90°	383.4	413.4	442.0	418.3	382.9
92.5°	363.2	373.1	410.2	374.4	364.1
95°	324.7	333.7	376.7	333.2	324.7
97.5°	288.4	296.9	340.4	295.6	286.6
100°	249.9	257.5	299.2	259.8	248.6
102.5°	215.0	220.8	256.2	221.2	214.5
105°	175.1	177.4	206.9	178.3	176.0
107.5°	129.9	132.6	147.8	134.4	132.1
110°	86.9	89.1	99.4	90.9	89.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	49.3	52.0	64.9	52.4	48.4
115°	19.7	26.0	33.6	26.4	20.2
117.5°	5.4	9.9	12.1	9.9	5.8
120°	4.5	4.9	4.5	4.9	4.0
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)