

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: P295514

Luminaire Tested: **BMK-36-MCL-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: P295514
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-251-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-36-MCL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH MEDIUM 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: 39110.0 lumens
Efficiency: N/A
Efficacy: 160.9 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.37 / 1.37
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

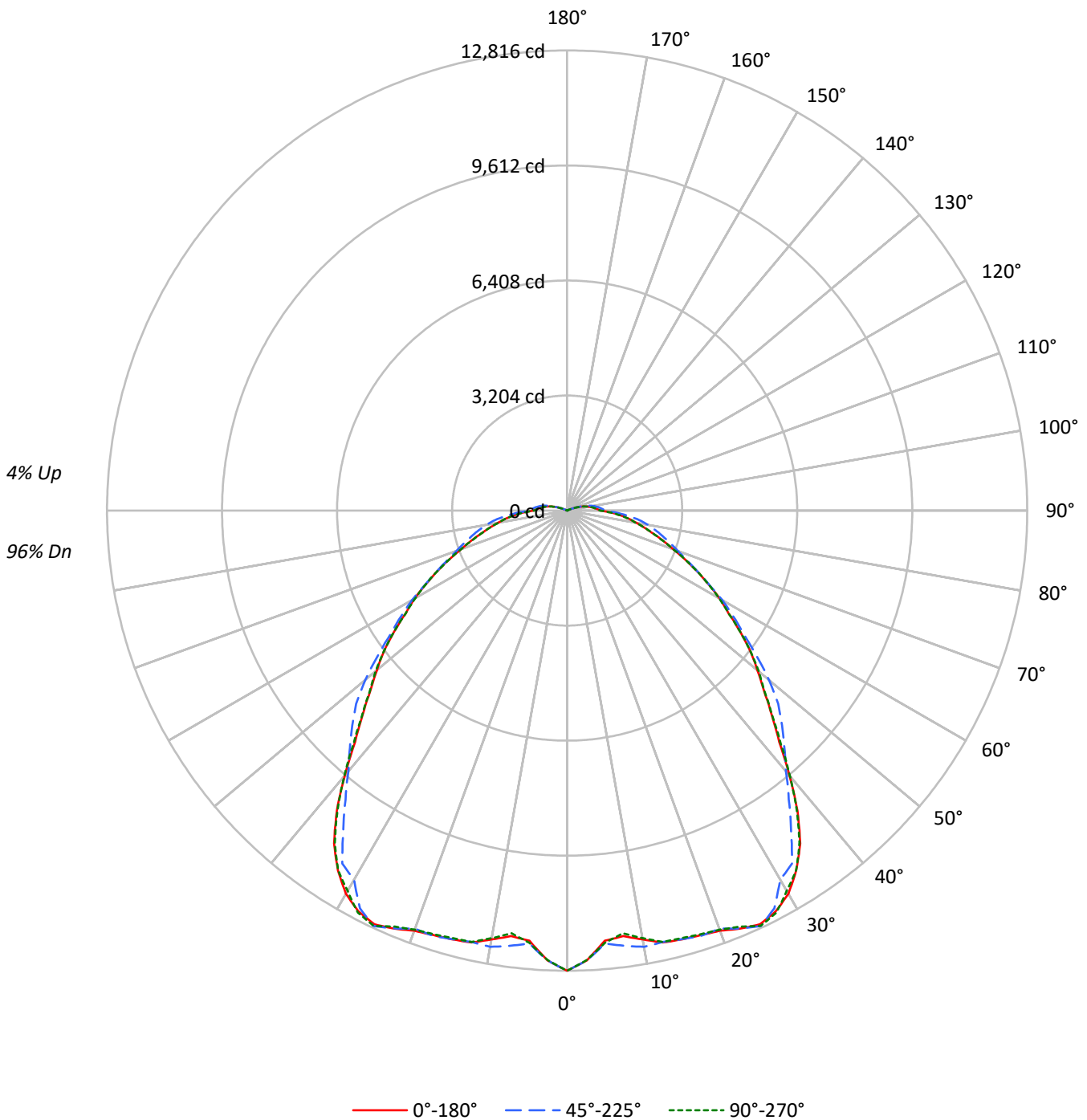
Input Watts (W): 243
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	102	97	93	104	99	95	91	94	91	88	90	87	84	86	83	81	79
2	97	89	82	76	94	87	80	75	82	77	72	79	74	70	75	71	68	66
3	89	78	70	63	86	76	69	62	73	66	61	69	64	59	66	62	58	55
4	81	69	61	54	79	68	60	53	65	58	52	62	56	51	59	54	50	48
5	75	62	53	46	73	61	52	46	58	51	45	56	49	44	54	48	44	41
6	69	56	47	41	67	55	46	40	53	45	40	51	44	39	49	43	38	36
7	64	51	42	36	62	50	42	36	48	41	35	46	40	35	45	39	34	32
8	60	46	38	32	58	46	37	32	44	37	31	42	36	31	41	35	31	29
9	56	43	34	29	54	42	34	29	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	98800	98800	98800
5°	92109	92698	92531
10°	92977	94588	92701
15°	95598	95561	95342
20°	97877	97409	97643
25°	102444	102875	102799
30°	102627	98839	101857
35°	98312	94415	97985
40°	88175	86712	88319
45°	78470	82412	78700
50°	72668	77065	73079
55°	67512	68954	67566
60°	62733	63695	62473
65°	57936	58095	57891
70°	53278	55567	53464
75°	51008	56794	51169
80°	51621	60632	51163
85°	55341	63908	55106



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1164.1	3.0
10°-20°	3509.3	9.0
20°-30°	5799.0	14.8
30°-40°	6901.9	17.6
40°-50°	6437.0	16.5
50°-60°	5364.1	13.7
60°-70°	4013.4	10.3
70°-80°	2786.5	7.1
80°-90°	1688.9	4.3
90°-100°	903.6	2.3
100°-110°	469.7	1.2
110°-120°	71.3	0.2
120°-130°	1.2	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°	10472.4	26.8
0°-40°	17374.3	44.4
0°-60°	29175.4	74.6
0°-90°	37664.1	96.3
90°-120°	1444.7	3.7
90°-150°	1445.9	3.7
90°-180°	1446.0	3.7
0°-180°	39110.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12816	12816	12816	12816	12816	
5°	12027	12116	12104	12087	12082	###
15°	12361	12446	12356	12418	12328	3502
25°	12714	12708	12768	12731	12758	5818
35°	11320	11134	10871	11141	11282	6990
45°	8057	8342	8461	8356	8080	6268
55°	5879	5972	6005	5977	5884	5266
65°	3989	4035	4000	4033	3986	3954
75°	2475	2617	2756	2621	2483	2651
85°	1479	1522	1708	1522	1473	1306
90°	935	998	1046	990	921	540
95°	769	819	916	814	776	603
105°	431	439	491	434	434	451
115°	41	47	61	49	42	69
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°	12816.1	12816.1	12816.1	12816.1	12816.1
2.5°	12538.4	12549.4	12536.9	12503.9	12527.5
5°	12027.0	12116.5	12103.9	12086.7	12082.0
7.5°	11953.3	12088.2	12223.1	12075.7	11871.7
10°	12127.4	12262.3	12337.6	12251.4	12091.4
12.5°	12323.5	12317.3	12309.4	12303.1	12303.1
15°	12361.2	12445.9	12356.5	12417.6	12328.2
17.5°	12395.7	12456.9	12417.6	12447.5	12369.0
20°	12449.0	12511.8	12389.4	12482.0	12419.2
22.5°	12601.2	12646.7	12596.5	12642.0	12543.1
25°	12714.1	12707.9	12767.5	12731.4	12758.1
27.5°	12583.9	12544.7	12491.4	12478.8	12621.6
30°	12323.5	12113.3	11868.6	12067.8	12231.0
32.5°	11879.6	11890.6	11656.8	11904.7	11873.3
35°	11319.6	11134.5	10870.9	11140.7	11281.9
37.5°	10535.2	10395.6	10143.1	10394.1	10503.9
40°	9639.5	9663.1	9479.5	9658.3	9655.2
42.5°	8742.2	8972.8	8954.0	8935.2	8809.7
45°	8056.7	8342.2	8461.4	8356.3	8080.3
47.5°	7438.7	7837.1	7968.9	7840.2	7455.9
50°	6921.0	7184.5	7339.8	7183.0	6960.2
52.5°	6426.9	6519.4	6648.1	6547.7	6434.7
55°	5879.4	5972.0	6004.9	5976.7	5884.1
57.5°	5335.1	5481.0	5487.2	5470.0	5331.9
60°	4910.0	4969.6	4985.3	4990.0	4889.6
62.5°	4422.1	4503.7	4447.2	4503.7	4433.1
65°	3989.1	4034.6	4000.1	4033.1	3986.0
67.5°	3543.6	3669.1	3614.2	3662.9	3554.6
70°	3138.9	3298.9	3273.8	3302.1	3149.9
72.5°	2806.4	2947.5	3005.6	2936.6	2792.2
75°	2475.4	2616.6	2756.2	2621.3	2483.2
77.5°	2213.4	2320.1	2517.7	2329.5	2210.3
80°	1949.9	2048.7	2290.3	2040.8	1932.6
82.5°	1736.5	1782.0	2025.2	1791.4	1727.1
85°	1479.3	1521.6	1708.3	1521.6	1473.0
87.5°	1215.7	1247.1	1371.0	1262.8	1198.5
90°	934.9	997.7	1046.3	989.8	920.8
92.5°	854.9	900.4	985.1	892.6	848.7
95°	768.7	818.8	916.1	814.1	776.5
97.5°	704.3	729.4	825.1	727.9	699.6
100°	624.3	649.4	746.7	641.6	614.9
102.5°	531.8	545.9	635.3	550.6	533.4
105°	431.4	439.2	491.0	434.5	434.5
107.5°	321.6	316.9	334.1	312.2	320.0
110°	207.1	192.9	208.6	192.9	210.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	112.9	102.0	122.4	103.5	111.4
115°	40.8	47.1	61.2	48.6	42.4
117.5°	11.0	18.8	22.0	18.8	11.0
120°	9.4	11.0	9.4	11.0	9.4
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)