

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: P295478

Luminaire Tested: **BMK-36-MFL-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: P295478
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-251-3)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-36-MFL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH MEDIUM 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: 38138.0 lumens
Efficiency: N/A
Efficacy: 156.9 lumens/watt
Spacing Criteria (0/90/45): 1.33 / 1.33 / 1.36
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

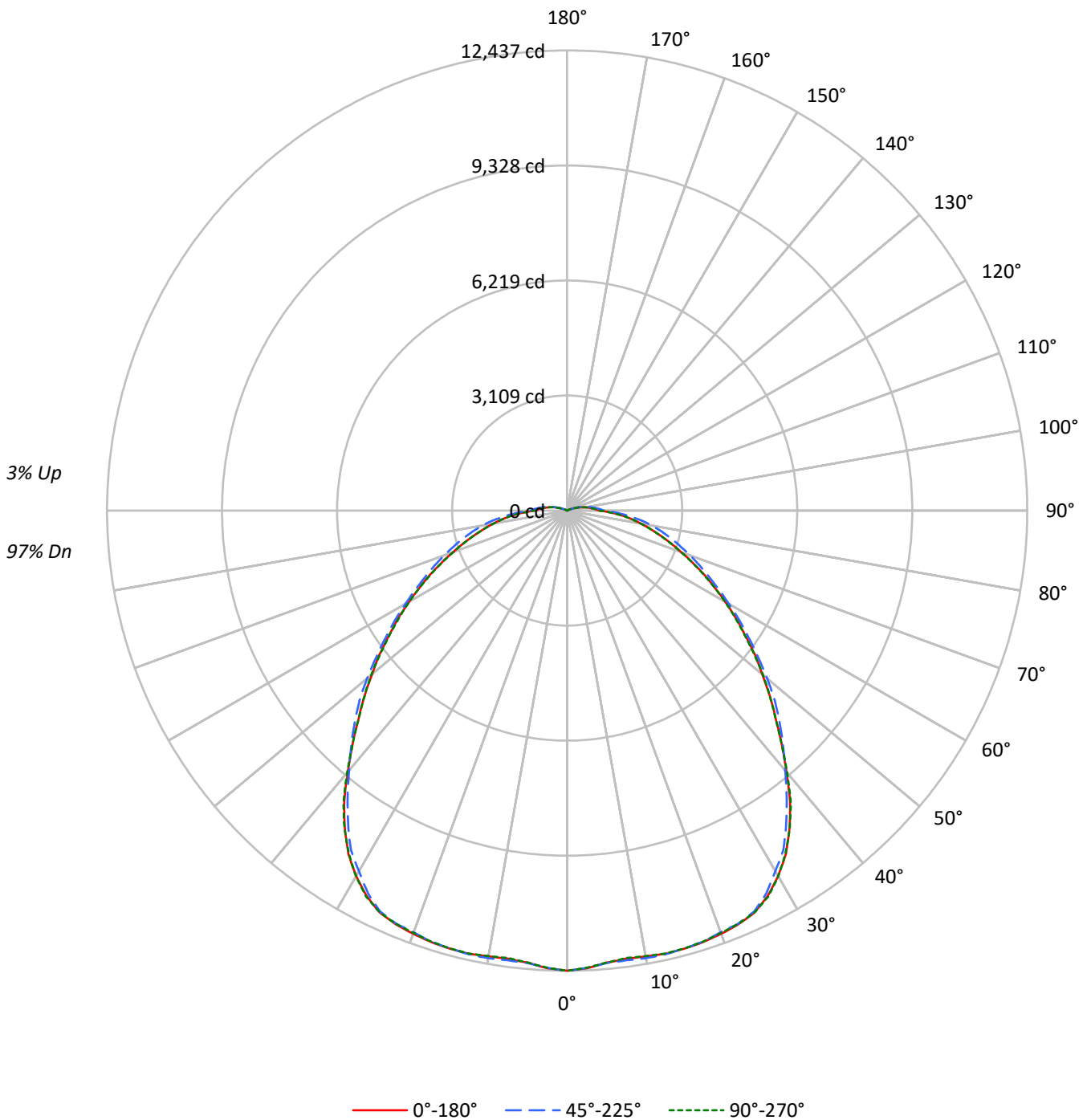
Input Watts (W): 243
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	99	99	99	97	
1	107	102	97	93	104	99	95	91	94	91	88	90	87	84	86	83	81	86	83	81	79	
2	97	89	81	75	94	86	80	74	82	77	72	78	74	70	75	71	68	75	71	68	65	
3	89	78	69	63	86	76	68	62	72	66	60	69	64	59	66	62	58	66	62	58	55	
4	81	69	60	53	79	67	59	53	64	57	52	62	56	51	59	54	49	59	54	49	47	
5	75	62	53	46	72	60	52	45	58	50	45	56	49	44	53	48	43	53	48	43	41	
6	69	56	47	40	67	54	46	40	52	45	39	50	44	39	48	43	38	48	43	38	36	
7	64	50	42	35	62	49	41	35	48	40	35	46	39	34	44	38	34	44	38	34	32	
8	60	46	38	32	58	45	37	31	44	36	31	42	36	31	41	35	30	41	35	30	28	
9	56	42	34	28	54	42	34	28	40	33	28	39	32	28	38	32	27	38	32	27	26	
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	35	29	25	23	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	95881	95881	95881
5°	93929	93990	93918
10°	93788	94186	93740
15°	94790	94718	94729
20°	95687	95366	95526
25°	96570	96355	96545
30°	94970	93714	95062
35°	90984	89660	91120
40°	84317	83858	84619
45°	77739	79177	77648
50°	72245	74091	72591
55°	67360	68785	67179
60°	63030	64454	62970
65°	59215	61337	58874
70°	55555	59874	55501
75°	53755	59873	53691
80°	53720	61286	53595
85°	55409	62517	55229



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1171.0	3.1
10°-20°	3467.8	9.1
20°-30°	5484.8	14.4
30°-40°	6486.9	17.0
40°-50°	6235.5	16.3
50°-60°	5328.4	14.0
60°-70°	4134.3	10.8
70°-80°	2916.3	7.6
80°-90°	1688.4	4.4
90°-100°	792.8	2.1
100°-110°	365.0	1.0
110°-120°	65.8	0.2
120°-130°	1.0	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°	10123.6	26.5
0°-40°	16610.5	43.6
0°-60°	28174.4	73.9
0°-90°	36913.3	96.8
90°-120°	1223.6	3.2
90°-150°	1224.6	3.2
90°-180°	1225.0	3.2
0°-180°	38138.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12437	12437	12437	12437	12437	
5°	12265	12268	12272	12255	12263	###
15°	12257	12269	12247	12255	12249	3468
25°	11985	11955	11958	11954	11982	5500
35°	10476	10407	10323	10419	10492	6521
45°	7982	8090	8129	8071	7972	6181
55°	5866	5948	5990	5954	5850	5270
65°	4077	4167	4223	4159	4054	4043
75°	2609	2738	2906	2747	2606	2774
85°	1481	1536	1671	1536	1476	1315
90°	867	950	994	947	864	502
95°	678	715	779	713	682	520
105°	331	336	361	338	330	352
115°	39	50	66	50	39	58
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°	12437.4	12437.4	12437.4	12437.4	12437.4
2.5°	12377.7	12365.2	12369.9	12355.7	12365.2
5°	12264.6	12267.8	12272.5	12255.2	12263.1
7.5°	12216.0	12231.7	12259.9	12223.8	12195.5
10°	12233.2	12259.9	12285.1	12245.8	12227.0
12.5°	12266.2	12274.1	12283.5	12264.6	12263.1
15°	12256.8	12269.4	12247.4	12255.2	12248.9
17.5°	12227.0	12231.7	12216.0	12223.8	12214.4
20°	12170.4	12162.6	12129.6	12154.7	12150.0
22.5°	12102.9	12091.9	12082.5	12096.6	12088.7
25°	11985.1	11955.2	11958.4	11953.7	11981.9
27.5°	11740.1	11691.4	11658.4	11682.0	11763.6
30°	11404.0	11338.0	11253.2	11333.3	11415.0
32.5°	11005.0	10954.8	10877.8	10950.1	10984.6
35°	10475.8	10406.7	10323.4	10419.2	10491.5
37.5°	9899.4	9857.0	9748.6	9852.2	9929.2
40°	9217.7	9227.1	9167.5	9249.1	9250.7
42.5°	8583.2	8647.6	8642.9	8642.9	8583.2
45°	7981.7	8090.1	8129.3	8071.2	7972.3
47.5°	7435.1	7543.5	7611.0	7534.1	7430.4
50°	6880.7	6995.4	7056.6	6981.2	6913.7
52.5°	6390.7	6442.5	6502.2	6436.2	6364.0
55°	5866.1	5947.8	5990.2	5954.1	5850.4
57.5°	5409.1	5467.2	5517.4	5481.3	5377.7
60°	4933.2	4997.6	5044.7	5016.4	4928.5
62.5°	4490.3	4584.5	4619.1	4573.5	4479.3
65°	4077.2	4166.7	4223.3	4158.9	4053.7
67.5°	3665.7	3783.5	3873.0	3796.1	3653.2
70°	3273.1	3428.6	3527.5	3409.7	3269.9
72.5°	2940.1	3079.9	3207.1	3075.2	2927.6
75°	2608.7	2737.5	2905.6	2746.9	2605.6
77.5°	2308.8	2431.3	2615.0	2426.5	2294.6
80°	2029.2	2126.6	2315.0	2120.3	2024.5
82.5°	1755.9	1828.2	2011.9	1825.0	1749.6
85°	1481.1	1536.0	1671.1	1536.0	1476.3
87.5°	1159.1	1248.6	1325.6	1245.5	1141.8
90°	867.0	950.2	994.2	947.1	863.8
92.5°	772.7	815.1	885.8	815.1	772.7
95°	678.5	714.6	779.0	713.0	681.6
97.5°	589.0	617.2	678.5	614.1	592.1
100°	507.3	521.4	578.0	524.6	504.2
102.5°	419.3	428.8	469.6	425.6	419.3
105°	331.4	336.1	361.2	337.7	329.8
107.5°	241.9	246.6	259.1	245.0	240.3
110°	160.2	163.3	179.0	163.3	161.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	92.7	100.5	116.2	100.5	92.7
115°	39.3	50.3	66.0	50.3	39.3
117.5°	12.6	20.4	25.1	20.4	11.0
120°	7.9	9.4	7.9	9.4	7.9
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)