

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: P295454

Luminaire Tested: **BMK-15-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: P295454
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-15-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: 16326.0 lumens
Efficiency: N/A
Efficacy: 174.1 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

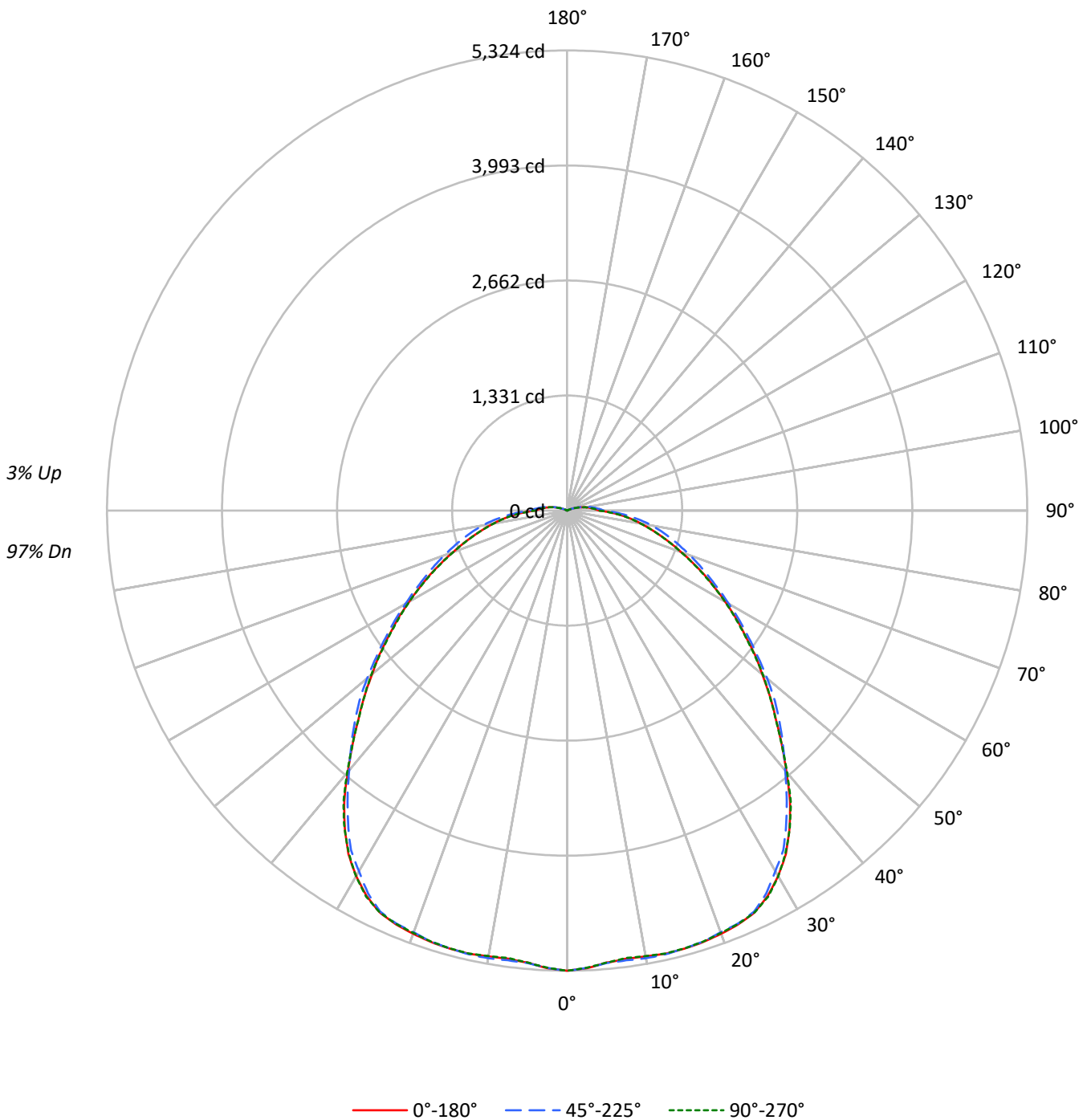
Input Watts (W): 93.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P295454

CATALOG NUMBER: BMK-15-MFL-UNV-L750-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P295454

CATALOG NUMBER: BMK-15-MFL-UNV-L750-CD-U

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°	41045	41045	41045
5°	40209	40235	40204
10°	40149	40319	40128
15°	40578	40546	40552
20°	40962	40824	40892
25°	41339	41247	41329
30°	40655	40117	40694
35°	38948	38381	39007
40°	36094	35898	36223
45°	33279	33894	33239
50°	30927	31717	31075
55°	28835	29446	28758
60°	26982	27591	26956
65°	25349	26257	25203
70°	23781	25631	23759
75°	23011	25630	22984
80°	22995	26235	22942
85°	23718	26763	23643



TEST NUMBER: P295454

CATALOG NUMBER: BMK-15-MFL-UNV-L750-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	501.3	3.1
10°-20°	1484.5	9.1
20°-30°	2347.9	14.4
30°-40°	2776.9	17.0
40°-50°	2669.3	16.3
50°-60°	2281.0	14.0
60°-70°	1769.8	10.8
70°-80°	1248.4	7.6
80°-90°	722.8	4.4
90°-100°	339.4	2.1
100°-110°	156.3	1.0
110°-120°	28.2	0.2
120°-130°	0.4	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°	4333.7	26.5
0°-40°	7110.6	43.6
0°-60°	12060.8	73.9
0°-90°	15801.7	96.8
90°-120°	523.8	3.2
90°-150°	524.2	3.2
90°-180°	524.0	3.2
0°-180°	16326.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5324	5324	5324	5324	5324	
5°	5250	5252	5254	5246	5250	501
15°	5247	5252	5243	5246	5244	1485
25°	5130	5118	5119	5117	5129	2354
35°	4484	4455	4419	4460	4491	2791
45°	3417	3463	3480	3455	3413	2646
55°	2511	2546	2564	2549	2504	2256
65°	1745	1784	1808	1780	1735	1731
75°	1117	1172	1244	1176	1115	1188
85°	634	658	715	658	632	563
90°	371	407	426	405	370	215
95°	290	306	334	305	292	222
105°	142	144	155	145	141	151
115°	17	22	28	22	17	25
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



TEST NUMBER: P295454

CATALOG NUMBER: BMK-15-MFL-UNV-L750-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5324.2	5324.2	5324.2	5324.2	5324.2
2.5°	5298.6	5293.2	5295.3	5289.2	5293.2
5°	5250.2	5251.6	5253.6	5246.2	5249.5
7.5°	5229.4	5236.1	5248.2	5232.7	5220.6
10°	5236.8	5248.2	5259.0	5242.1	5234.1
12.5°	5250.9	5254.2	5258.3	5250.2	5249.5
15°	5246.9	5252.2	5242.8	5246.2	5243.5
17.5°	5234.1	5236.1	5229.4	5232.7	5228.7
20°	5209.9	5206.5	5192.4	5203.2	5201.1
22.5°	5181.0	5176.3	5172.2	5178.3	5174.9
25°	5130.5	5117.8	5119.1	5117.1	5129.2
27.5°	5025.7	5004.8	4990.7	5000.8	5035.7
30°	4881.8	4853.5	4817.2	4851.5	4886.5
32.5°	4711.0	4689.5	4656.5	4687.5	4702.3
35°	4484.4	4454.8	4419.2	4460.2	4491.2
37.5°	4237.7	4219.5	4173.1	4217.5	4250.5
40°	3945.9	3949.9	3924.4	3959.3	3960.0
42.5°	3674.3	3701.8	3699.8	3699.8	3674.3
45°	3416.8	3463.2	3480.0	3455.1	3412.7
47.5°	3182.8	3229.2	3258.1	3225.2	3180.8
50°	2945.5	2994.6	3020.8	2988.5	2959.6
52.5°	2735.7	2757.9	2783.4	2755.2	2724.3
55°	2511.1	2546.1	2564.3	2548.8	2504.4
57.5°	2315.5	2340.4	2361.9	2346.4	2302.1
60°	2111.8	2139.3	2159.5	2147.4	2109.8
62.5°	1922.2	1962.5	1977.3	1957.8	1917.5
65°	1745.4	1783.7	1807.9	1780.3	1735.3
67.5°	1569.2	1619.6	1658.0	1625.0	1563.8
70°	1401.1	1467.7	1510.1	1459.6	1399.8
72.5°	1258.6	1318.4	1372.9	1316.4	1253.2
75°	1116.7	1171.9	1243.8	1175.9	1115.4
77.5°	988.3	1040.8	1119.4	1038.7	982.3
80°	868.6	910.3	991.0	907.6	866.6
82.5°	751.7	782.6	861.3	781.2	749.0
85°	634.0	657.5	715.4	657.5	632.0
87.5°	496.2	534.5	567.4	533.2	488.8
90°	371.1	406.8	425.6	405.4	369.8
92.5°	330.8	348.9	379.2	348.9	330.8
95°	290.4	305.9	333.5	305.2	291.8
97.5°	252.1	264.2	290.4	262.9	253.5
100°	217.2	223.2	247.4	224.6	215.8
102.5°	179.5	183.5	201.0	182.2	179.5
105°	141.9	143.9	154.6	144.6	141.2
107.5°	103.5	105.6	110.9	104.9	102.9
110°	68.6	69.9	76.6	69.9	69.2



TEST NUMBER: P295454

CATALOG NUMBER: BMK-15-MFL-UNV-L750-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	39.7	43.0	49.8	43.0	39.7
115°	16.8	21.5	28.2	21.5	16.8
117.5°	5.4	8.7	10.8	8.7	4.7
120°	3.4	4.0	3.4	4.0	3.4
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)