

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: P381701

Luminaire Tested: **BMK-60-MFL-UNV-L750-CD-U**

Issue Date: 2/4/2020

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: P381701
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-5)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-60-MFL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH MEDIUM FROSTED LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 62293.3 lumens
Efficiency: N/A
Efficacy: 153.5 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.36 / 1.38
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

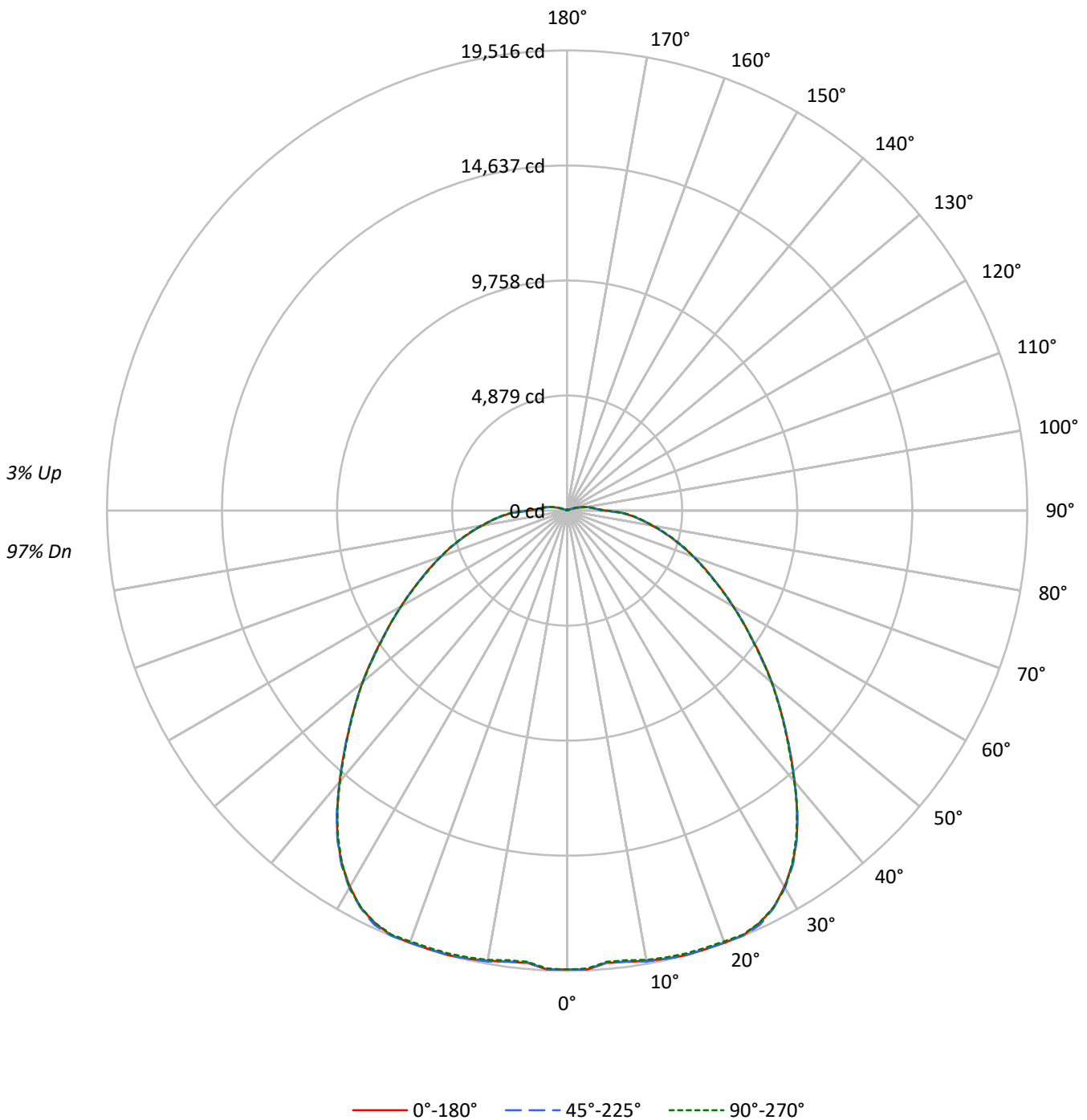
Input Watts (W): 405.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	97
1	107	101	97	92	104	99	95	91	94	90	87		89	87	84		85	83	81	78
2	97	88	81	75	94	86	79	74	82	76	71		78	73	69		75	71	67	65
3	88	77	69	62	85	76	68	61	72	65	60		69	63	58		66	61	57	55
4	81	69	60	53	78	67	59	52	64	57	51		61	55	50		59	53	49	47
5	74	61	52	45	72	60	51	45	57	50	44		55	49	43		53	47	43	40
6	69	55	46	40	67	54	46	39	52	44	39		50	43	38		48	42	38	35
7	64	50	41	35	62	49	41	35	47	40	34		46	39	34		44	38	33	31
8	59	46	37	31	58	45	37	31	43	36	31		42	35	30		40	34	30	28
9	55	42	34	28	54	41	33	28	40	33	28		39	32	27		37	31	27	25
10	52	39	31	25	51	38	30	25	37	30	25		36	29	25		35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	150083	150083	150083
5°	147535	147415	147215
10°	148725	148945	148413
15°	151006	150986	150479
20°	153393	153362	152940
25°	155610	156169	155494
30°	153504	153853	153886
35°	147565	147576	147144
40°	137399	137363	137052
45°	127342	127507	127215
50°	119028	118932	118794
55°	110562	110276	110081
60°	104006	103923	104006
65°	99332	99124	98724
70°	96762	96539	96828
75°	95652	95733	96623
80°	96659	97525	98425
85°	104618	105108	106920



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1844.2	3.0
10°-20°	5519.6	8.9
20°-30°	8869.3	14.2
30°-40°	10559.8	17.0
40°-50°	10115.2	16.2
50°-60°	8630.1	13.9
60°-70°	6787.8	10.9
70°-80°	4926.3	7.9
80°-90°	3010.5	4.8
90°-100°	1270.1	2.0
100°-110°	570.2	0.9
110°-120°	86.3	0.1
120°-130°	26.1	0.0
130°-140°	29.0	0.0
140°-150°	24.7	0.0
150°-160°	13.6	0.0
160°-170°	7.9	0.0
170°-180°	2.6	0.0
0°-30°	16233.0	26.1
0°-40°	26792.8	43.0
0°-60°	45538.1	73.1
0°-90°	60262.7	96.7
90°-120°	1926.6	3.1
90°-150°	2006.5	3.2
90°-180°	2031.0	3.3
0°-180°	62293.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	19459	19459	19459	19459	19459	
5°	19254	19215	19239	19261	19213	###
15°	19516	19450	19514	19542	19448	5523
25°	19303	19298	19372	19355	19289	8865
35°	16982	16957	16984	17002	16934	10557
45°	13068	13110	13085	13091	13055	10115
55°	9624	9628	9599	9590	9582	8646
65°	6836	6821	6822	6808	6794	6804
75°	4640	4664	4644	4637	4687	4915
85°	2796	2837	2809	2807	2857	2450
90°	1610	1613	1459	1586	1647	941
95°	1133	1158	1145	1137	1148	867
105°	525	538	534	535	542	563
115°	56	59	59	58	56	84
125°	29	30	29	29	30	26
135°	38	38	38	38	38	29
145°	41	41	41	41	39	25
155°	28	29	28	28	28	14
165°	29	28	28	28	28	8
175°	28	28	28	28	29	3
180°	28	28	28	28	28	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	19458.6	19458.6	19458.6	19458.6	19458.6
2.5°	19479.5	19429.8	19471.7	19486.1	19433.8
5°	19254.5	19215.3	19238.8	19261.1	19212.7
7.5°	19301.6	19240.2	19287.2	19299.0	19229.7
10°	19389.3	19386.7	19418.1	19405.0	19348.7
12.5°	19461.2	19431.1	19465.2	19470.4	19408.9
15°	19516.2	19449.5	19513.6	19542.3	19448.1
17.5°	19499.2	19429.8	19503.1	19542.3	19444.2
20°	19500.5	19418.1	19496.5	19525.3	19442.9
22.5°	19493.9	19444.2	19510.9	19543.6	19469.1
25°	19302.9	19297.7	19372.3	19355.3	19288.6
27.5°	18972.0	18944.5	18987.7	19004.7	18958.9
30°	18423.9	18405.6	18465.7	18498.4	18469.7
32.5°	17780.3	17777.6	17815.6	17786.8	17755.4
35°	16982.3	16957.4	16983.6	17001.9	16933.9
37.5°	16009.0	16011.7	16045.7	15994.7	16020.8
40°	15013.5	15029.2	15009.6	14995.2	14975.6
42.5°	14020.7	14035.1	14022.0	14018.0	13972.3
45°	13068.3	13110.2	13085.3	13090.6	13055.3
47.5°	12181.4	12194.5	12191.9	12172.3	12165.7
50°	11331.1	11322.0	11322.0	11273.6	11308.9
52.5°	10463.8	10466.4	10414.1	10398.4	10439.0
55°	9624.0	9627.9	9599.1	9590.0	9582.1
57.5°	8849.6	8843.0	8849.6	8822.1	8867.9
60°	8136.6	8132.7	8130.1	8106.6	8136.6
62.5°	7472.1	7459.0	7452.5	7439.4	7453.8
65°	6836.3	6820.7	6822.0	6807.6	6794.5
67.5°	6255.5	6243.8	6237.2	6234.6	6221.5
70°	5698.3	5690.4	5685.2	5672.1	5702.2
72.5°	5164.5	5168.5	5150.2	5138.4	5201.2
75°	4640.0	4663.5	4643.9	4637.4	4687.1
77.5°	4135.0	4174.3	4150.7	4148.1	4190.0
80°	3649.7	3695.5	3682.4	3670.6	3716.4
82.5°	3208.9	3259.9	3241.6	3225.9	3266.4
85°	2795.5	2837.4	2808.6	2807.3	2857.0
87.5°	2345.5	2383.4	2322.0	2354.7	2396.5
90°	1610.3	1612.9	1458.6	1585.5	1647.0
92.5°	1299.0	1323.8	1295.1	1301.6	1314.7
95°	1132.9	1157.7	1144.6	1136.8	1148.5
97.5°	983.7	1004.7	991.6	990.3	1000.7
100°	834.6	849.0	837.2	841.1	849.0
102.5°	686.8	699.9	693.3	695.9	706.4
105°	524.6	537.6	533.7	535.0	541.6
107.5°	372.8	379.4	372.8	375.4	384.6
110°	232.8	239.4	228.9	235.5	247.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	120.3	128.2	130.8	128.2	124.3
115°	56.3	58.9	58.9	57.6	56.3
117.5°	27.5	27.5	26.2	27.5	27.5
120°	23.5	24.9	23.5	23.5	24.9
122.5°	26.2	27.5	26.2	26.2	27.5
125°	28.8	30.1	28.8	28.8	30.1
127.5°	31.4	32.7	31.4	31.4	32.7
130°	34.0	34.0	34.0	34.0	34.0
132.5°	35.3	36.6	35.3	35.3	36.6
135°	37.9	37.9	37.9	37.9	37.9
137.5°	39.2	39.2	39.2	39.2	40.6
140°	40.6	40.6	40.6	40.6	40.6
142.5°	41.9	40.6	40.6	41.9	40.6
145°	40.6	40.6	40.6	40.6	39.2
147.5°	37.9	37.9	37.9	37.9	37.9
150°	34.0	34.0	34.0	34.0	34.0
152.5°	30.1	30.1	30.1	30.1	30.1
155°	27.5	28.8	27.5	27.5	27.5
157.5°	28.8	28.8	27.5	27.5	27.5
160°	28.8	28.8	27.5	27.5	27.5
162.5°	28.8	28.8	27.5	27.5	27.5
165°	28.8	27.5	27.5	27.5	27.5
167.5°	28.8	27.5	27.5	27.5	27.5
170°	28.8	28.8	27.5	27.5	27.5
172.5°	27.5	28.8	27.5	27.5	27.5
175°	27.5	27.5	27.5	27.5	28.8
177.5°	26.2	26.2	27.5	27.5	28.8
180°	27.5	27.5	27.5	27.5	27.5

(END OF REPORT)