

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: P381717

Luminaire Tested: **BMK-60-MCL-UNV-L735-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: P381717
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-6)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-60-MCL-UNV-L735-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH MEDIUM CLEAR LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 62393.1 lumens
Efficiency: N/A
Efficacy: 153.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.41 / 1.39
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

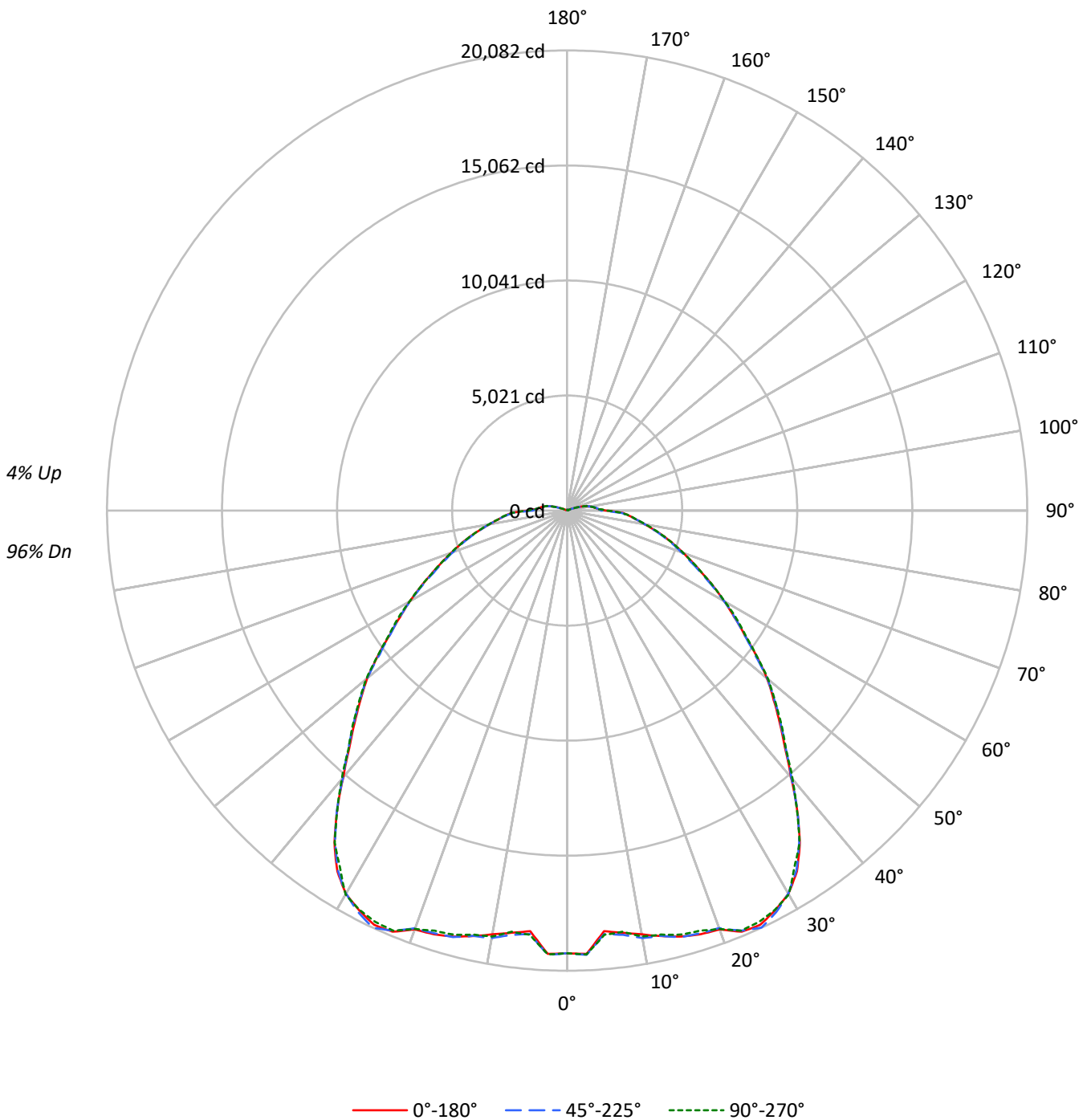
Input Watts (W): 405.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	90	87	89	87	84	85	83	81	78
2	97	88	81	75	94	86	80	74	82	77	72	78	74	70	75	71	68	65
3	89	78	69	63	86	76	68	62	72	66	60	69	63	59	66	61	57	55
4	81	69	60	53	79	67	59	53	64	57	52	62	55	50	59	54	49	47
5	75	62	53	46	72	60	52	45	58	50	45	55	49	44	53	48	43	41
6	69	56	47	40	67	54	46	40	52	45	39	50	44	38	48	42	38	36
7	64	50	42	35	62	49	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	37	32	58	45	37	31	43	36	31	42	35	31	41	35	30	28
9	56	42	34	28	54	41	34	28	40	33	28	39	32	28	37	32	27	25
10	52	39	31	26	51	38	31	26	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	148993	148993	148993
5°	141149	142113	142428
10°	144046	145297	144774
15°	148901	149090	148236
20°	152962	152547	152841
25°	160797	161894	159680
30°	160884	160809	161215
35°	153830	153451	153674
40°	139137	139325	140136
45°	127842	128467	128879
50°	119620	119823	120308
55°	108652	108313	109154
60°	101281	101182	101593
65°	94829	93634	94903
70°	91245	90090	91397
75°	90550	89305	90470
80°	90792	91065	92220
85°	102683	102253	104079



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1791.8	2.9
10°-20°	5445.5	8.7
20°-30°	9129.8	14.6
30°-40°	10950.3	17.6
40°-50°	10207.0	16.4
50°-60°	8513.5	13.6
60°-70°	6467.8	10.4
70°-80°	4613.6	7.4
80°-90°	2923.4	4.7
90°-100°	1404.1	2.3
100°-110°	731.0	1.2
110°-120°	99.1	0.2
120°-130°	29.6	0.0
130°-140°	32.9	0.1
140°-150°	27.6	0.0
150°-160°	14.8	0.0
160°-170°	8.4	0.0
170°-180°	2.8	0.0
0°-30°	16367.1	26.2
0°-40°	27317.4	43.8
0°-60°	46037.8	73.8
0°-90°	60042.7	96.2
90°-120°	2234.3	3.6
90°-150°	2324.3	3.7
90°-180°	2350.0	3.8
0°-180°	62393.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	19317	19317	19317	19317	19317	
5°	18421	18501	18547	18560	18588	###
15°	19244	19192	19268	19311	19158	5450
25°	19946	19988	20082	19936	19808	9125
35°	17703	17654	17660	17716	17685	10963
45°	13120	13154	13184	13199	13226	10168
55°	9458	9433	9428	9404	9501	8533
65°	6526	6413	6444	6456	6532	6515
75°	4392	4360	4332	4342	4389	4633
85°	2744	2744	2732	2721	2781	2382
90°	1696	1631	1493	1613	1723	991
95°	1244	1293	1296	1257	1249	980
105°	704	711	705	698	713	735
115°	56	60	62	59	60	97
125°	33	33	32	33	35	29
135°	42	42	42	42	44	33
145°	46	45	45	45	44	28
155°	31	31	30	30	31	15
165°	31	30	30	30	30	9
175°	28	30	28	30	31	3
180°	30	30	30	30	30	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	19317.3	19317.3	19317.3	19317.3	19317.3
2.5°	19364.8	19314.7	19405.9	19438.0	19387.9
5°	18421.1	18500.7	18546.9	18559.7	18588.0
7.5°	18581.6	18500.7	18671.4	18671.4	18539.2
10°	18779.3	18966.8	18942.4	18911.5	18874.3
12.5°	19022.0	19014.3	19011.7	18984.7	18953.9
15°	19244.1	19191.5	19268.5	19310.9	19158.1
17.5°	19385.3	19237.7	19340.4	19412.3	19226.1
20°	19445.7	19292.9	19393.0	19513.7	19430.3
22.5°	19897.6	19801.3	19841.1	19931.0	19837.3
25°	19946.4	19987.5	20082.5	19936.2	19807.8
27.5°	19664.0	19723.0	19760.2	19739.7	19639.6
30°	19309.6	19295.5	19300.6	19372.5	19349.4
32.5°	18670.2	18589.3	18618.8	18537.9	18454.5
35°	17703.3	17654.5	17659.7	17716.2	17685.4
37.5°	16501.5	16427.1	16506.7	16547.8	16478.4
40°	15203.5	15313.9	15224.0	15253.5	15312.6
42.5°	14080.0	14180.1	14133.9	14175.0	14127.5
45°	13119.6	13154.2	13183.8	13199.2	13226.1
47.5°	12227.2	12264.5	12287.6	12304.3	12305.5
50°	11387.5	11373.4	11406.8	11320.7	11453.0
52.5°	10410.4	10318.0	10314.1	10285.9	10434.8
55°	9457.7	9433.3	9428.2	9403.8	9501.4
57.5°	8652.7	8655.2	8668.1	8675.8	8757.9
60°	7923.4	7855.3	7915.7	7897.7	7947.8
62.5°	7212.0	7131.2	7160.7	7159.4	7226.2
65°	6526.4	6413.4	6444.2	6455.8	6531.5
67.5°	5930.6	5870.3	5835.6	5884.4	5939.6
70°	5373.4	5332.3	5305.4	5337.5	5382.4
72.5°	4868.8	4811.0	4812.3	4805.9	4885.5
75°	4392.5	4360.4	4332.1	4342.4	4388.6
77.5°	3882.7	3923.8	3868.6	3889.1	3909.7
80°	3428.2	3474.4	3438.5	3434.6	3482.1
82.5°	3068.7	3072.5	3071.2	3049.4	3064.8
85°	2743.8	2743.8	2732.3	2720.7	2781.1
87.5°	2444.7	2381.8	2368.9	2377.9	2413.9
90°	1696.1	1630.6	1493.3	1612.7	1723.1
92.5°	1397.0	1421.4	1385.4	1385.4	1400.8
95°	1244.2	1293.0	1295.5	1257.0	1249.3
97.5°	1144.0	1174.8	1163.3	1142.7	1154.3
100°	1022.0	1032.3	1022.0	1014.3	1018.2
102.5°	911.6	910.3	905.2	896.2	920.6
105°	703.6	711.3	704.9	698.5	712.6
107.5°	493.0	486.6	476.4	477.6	484.1
110°	299.2	300.4	282.5	287.6	305.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	136.1	143.8	148.9	141.2	145.1
115°	56.5	60.3	61.6	59.1	60.3
117.5°	29.5	29.5	28.2	29.5	32.1
120°	27.0	28.2	25.7	27.0	29.5
122.5°	29.5	30.8	29.5	30.8	32.1
125°	33.4	33.4	32.1	33.4	34.7
127.5°	36.0	36.0	34.7	36.0	37.2
130°	37.2	38.5	38.5	38.5	38.5
132.5°	39.8	41.1	39.8	41.1	41.1
135°	42.4	42.4	42.4	42.4	43.7
137.5°	44.9	44.9	44.9	44.9	44.9
140°	46.2	46.2	46.2	46.2	46.2
142.5°	47.5	46.2	46.2	46.2	44.9
145°	46.2	44.9	44.9	44.9	43.7
147.5°	42.4	42.4	41.1	42.4	41.1
150°	38.5	37.2	37.2	37.2	37.2
152.5°	33.4	33.4	32.1	33.4	33.4
155°	30.8	30.8	29.5	29.5	30.8
157.5°	30.8	30.8	29.5	29.5	30.8
160°	30.8	30.8	29.5	29.5	29.5
162.5°	30.8	30.8	29.5	29.5	29.5
165°	30.8	29.5	29.5	29.5	29.5
167.5°	30.8	29.5	29.5	29.5	29.5
170°	30.8	29.5	29.5	29.5	29.5
172.5°	29.5	29.5	29.5	29.5	29.5
175°	28.2	29.5	28.2	29.5	30.8
177.5°	28.2	28.2	28.2	29.5	30.8
180°	29.5	29.5	29.5	29.5	29.5

(END OF REPORT)