

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: P295473

Luminaire Tested: **BMK-30-MFL-UNV-L835-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: P295473  
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-30-MFL-UNV-L835-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH MEDIUM FROSTED LENS  
Light Source: (528) 80 CRI 3500K LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 29234.0 lumens  
Efficiency: N/A  
Efficacy: 145.4 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

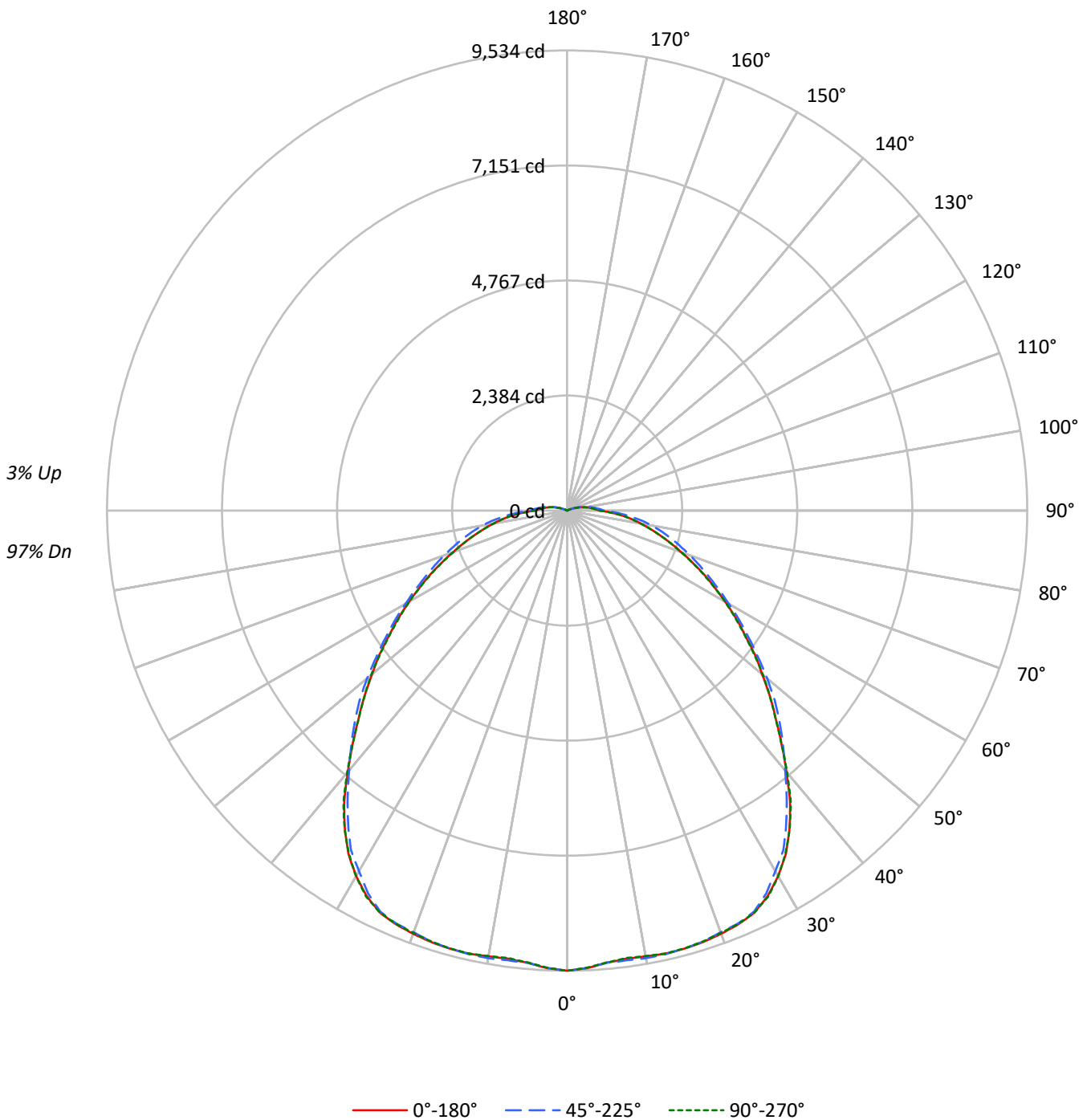
Input Watts (W): 201.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	73496	73496	73496
5°	72000	72046	71990
10°	71892	72196	71855
15°	72659	72604	72613
20°	73347	73101	73224
25°	74025	73859	74005
30°	72797	71835	72867
35°	69742	68727	69846
40°	64632	64280	64864
45°	59589	60692	59519
50°	55378	56793	55644
55°	51634	52726	51495
60°	48314	49406	48268
65°	45390	47017	45129
70°	42584	45896	42544
75°	41206	45894	41156
80°	41177	46977	41081
85°	42472	47919	42337



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	897.6	3.1
10°-20°	2658.2	9.1
20°-30°	4204.3	14.4
30°-40°	4972.4	17.0
40°-50°	4779.7	16.3
50°-60°	4084.4	14.0
60°-70°	3169.1	10.8
70°-80°	2235.5	7.6
80°-90°	1294.2	4.4
90°-100°	607.7	2.1
100°-110°	279.8	1.0
110°-120°	50.4	0.2
120°-130°	0.8	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°	7760.1	26.5
0°-40°	12732.5	43.6
0°-60°	21596.6	73.9
0°-90°	28295.3	96.8
90°-120°	938.0	3.2
90°-150°	938.7	3.2
90°-180°	939.0	3.2
0°-180°	29234.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	9534	9534	9534	9534	9534	
5°	9401	9404	9407	9394	9400	897
15°	9395	9405	9388	9394	9389	2658
25°	9187	9164	9166	9163	9184	4216
35°	8030	7977	7913	7987	8042	4998
45°	6118	6201	6231	6187	6111	4738
55°	4497	4559	4592	4564	4484	4040
65°	3125	3194	3237	3188	3107	3099
75°	2000	2098	2227	2106	1997	2127
85°	1135	1177	1281	1177	1132	1008
90°	665	728	762	726	662	385
95°	520	548	597	547	522	398
105°	254	258	277	259	253	270
115°	30	38	51	38	30	44
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°	9533.7	9533.7	9533.7	9533.7	9533.7
2.5°	9487.9	9478.3	9481.9	9471.1	9478.3
5°	9401.2	9403.7	9407.3	9394.0	9400.0
7.5°	9363.9	9376.0	9397.6	9369.9	9348.3
10°	9377.2	9397.6	9416.9	9386.8	9372.4
12.5°	9402.5	9408.5	9415.7	9401.2	9400.0
15°	9395.2	9404.9	9388.0	9394.0	9389.2
17.5°	9372.4	9376.0	9363.9	9369.9	9362.7
20°	9329.0	9323.0	9297.7	9317.0	9313.4
22.5°	9277.2	9268.8	9261.6	9272.4	9266.4
25°	9187.0	9164.1	9166.5	9162.9	9184.5
27.5°	8999.1	8961.8	8936.5	8954.6	9017.2
30°	8741.5	8690.9	8625.9	8687.3	8749.9
32.5°	8435.7	8397.2	8338.2	8393.6	8420.1
35°	8030.0	7977.0	7913.2	7986.7	8042.0
37.5°	7588.2	7555.7	7472.6	7552.1	7611.0
40°	7065.7	7072.9	7027.2	7089.8	7091.0
42.5°	6579.3	6628.7	6625.1	6625.1	6579.3
45°	6118.2	6201.3	6231.4	6186.8	6111.0
47.5°	5699.3	5782.3	5834.1	5775.1	5695.6
50°	5274.3	5362.2	5409.1	5351.3	5299.6
52.5°	4898.7	4938.4	4984.1	4933.6	4878.2
55°	4496.6	4559.2	4591.7	4564.0	4484.5
57.5°	4146.2	4190.8	4229.3	4201.6	4122.2
60°	3781.4	3830.8	3866.9	3845.3	3777.8
62.5°	3441.9	3514.2	3540.7	3505.8	3433.5
65°	3125.3	3193.9	3237.3	3187.9	3107.3
67.5°	2809.9	2900.2	2968.8	2909.8	2800.3
70°	2508.9	2628.1	2704.0	2613.7	2506.5
72.5°	2253.7	2360.8	2458.4	2357.2	2244.1
75°	1999.7	2098.4	2227.2	2105.6	1997.3
77.5°	1769.7	1863.6	2004.5	1860.0	1758.9
80°	1555.4	1630.1	1774.5	1625.3	1551.8
82.5°	1346.0	1401.3	1542.2	1398.9	1341.1
85°	1135.3	1177.4	1280.9	1177.4	1131.7
87.5°	888.5	957.1	1016.1	954.7	875.2
90°	664.6	728.4	762.1	726.0	662.1
92.5°	592.3	624.8	679.0	624.8	592.3
95°	520.1	547.8	597.1	546.6	522.5
97.5°	451.5	473.1	520.1	470.7	453.9
100°	388.9	399.7	443.0	402.1	386.5
102.5°	321.4	328.7	360.0	326.3	321.4
105°	254.0	257.6	276.9	258.8	252.8
107.5°	185.4	189.0	198.6	187.8	184.2
110°	122.8	125.2	137.2	125.2	124.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	71.0	77.0	89.1	77.0	71.0
115°	30.1	38.5	50.6	38.5	30.1
117.5°	9.6	15.7	19.3	15.7	8.4
120°	6.0	7.2	6.0	7.2	6.0
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)