

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: P294507

Luminaire Tested: **BMK-30-WCL-UNV-L740-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: P294507
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1903-198-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-30-WCL-UNV-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE CLEAR LENS
Light Source: (528) 70 CRI 4000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33272.0 lumens
Efficiency: N/A
Efficacy: 165.5 lumens/watt
Spacing Criteria (0/90/45): 1.8 / 1.79 / 1.79
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

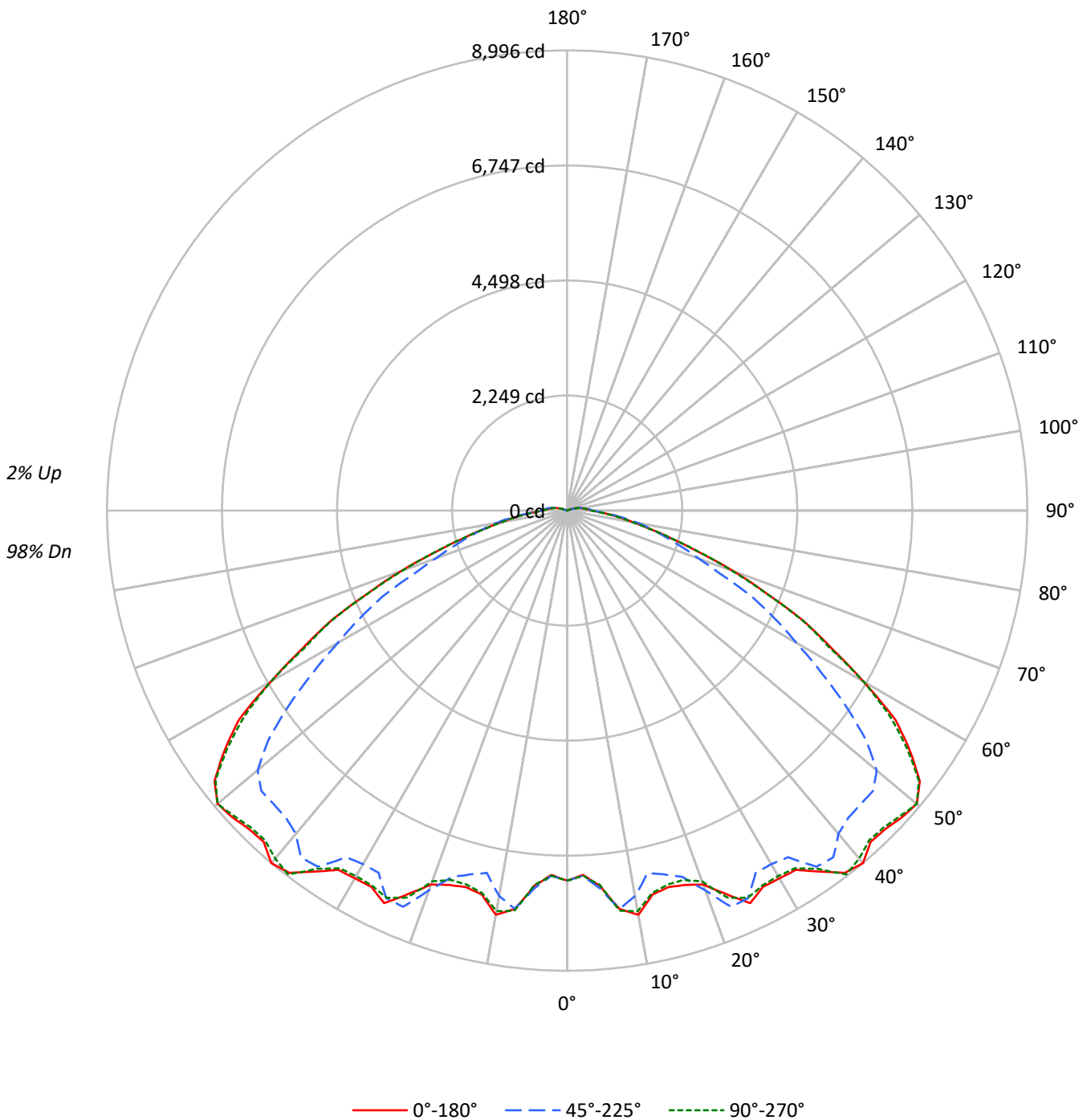
Input Watts (W): 201.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	108	102	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83	80
2	97	88	81	75	94	86	80	74	82	77	72	79	74	70	75	71	68	66
3	88	77	68	61	85	75	67	60	72	65	59	68	63	58	66	61	56	54
4	80	67	58	51	77	66	57	50	63	55	49	60	54	48	58	52	47	45
5	73	59	50	43	71	58	49	42	56	48	42	53	46	41	51	45	40	38
6	67	53	43	37	65	52	43	36	50	42	36	48	41	35	46	40	35	33
7	62	47	38	32	60	46	38	32	45	37	31	43	36	31	41	35	30	28
8	57	43	34	28	55	42	34	28	41	33	27	39	32	27	38	31	27	25
9	53	39	30	25	51	38	30	24	37	29	24	36	29	24	35	28	24	22
10	50	36	27	22	48	35	27	22	34	27	22	33	26	21	32	26	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	55772	55772	55772
5°	56386	56794	56244
10°	61513	58673	60961
15°	58938	56960	58547
20°	61154	62118	60631
25°	68235	67376	67311
30°	69125	66440	68703
35°	74799	73827	74221
40°	82289	75464	81216
45°	85724	79028	85257
50°	93643	82927	93671
55°	93906	76312	93172
60°	85455	66186	85523
65°	73996	57897	73803
70°	58526	46405	57939
75°	43598	40907	43872
80°	34566	37457	33791
85°	30306	32001	29506



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	726.6	2.2
10°-20°	2137.5	6.4
20°-30°	3737.5	11.2
30°-40°	5322.2	16.0
40°-50°	6587.5	19.8
50°-60°	6552.8	19.7
60°-70°	4441.5	13.3
70°-80°	2202.5	6.6
80°-90°	918.7	2.8
90°-100°	432.3	1.3
100°-110°	187.9	0.6
110°-120°	24.3	0.1
120°-130°	0.6	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°	6601.6	19.8
0°-40°	11923.8	35.8
0°-60°	25064.1	75.3
0°-90°	32626.8	98.1
90°-120°	644.6	1.9
90°-150°	645.2	1.9
90°-180°	645.0	1.9
0°-180°	33272.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7235	7235	7235	7235	7235	
5°	7362	7333	7416	7365	7344	731
15°	7621	7346	7365	7360	7570	2186
25°	8468	7962	8362	7930	8354	3815
35°	8612	8639	8500	8660	8546	5431
45°	8802	8532	8114	8500	8754	6858
55°	8178	7424	6646	7368	8114	7221
65°	5095	4429	3986	4447	5082	4989
75°	2116	1980	1985	2001	2129	2333
85°	810	789	855	786	789	764
90°	485	517	493	512	477	275
95°	370	397	413	392	368	285
105°	178	170	165	173	178	189
115°	13	16	19	16	13	24
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°	7234.6	7234.6	7234.6	7234.6	7234.6
2.5°	7128.0	7157.4	7146.7	7136.0	7146.7
5°	7362.5	7333.2	7415.8	7365.2	7343.9
7.5°	7855.5	7783.6	7850.2	7786.2	7887.5
10°	8023.4	7903.5	7653.0	7874.2	7951.4
12.5°	7690.3	7573.0	7255.9	7594.4	7658.3
15°	7621.0	7346.5	7365.2	7359.9	7570.4
17.5°	7671.6	7343.9	7509.1	7349.2	7570.4
20°	7778.2	7631.7	7900.8	7637.0	7711.6
22.5°	8114.0	7986.1	8383.1	7980.7	8188.6
25°	8468.4	7962.1	8361.8	7930.1	8353.8
27.5°	8292.5	8010.1	7983.4	7978.1	8263.2
30°	8300.5	8098.0	7978.1	8119.3	8249.9
32.5°	8327.1	8260.5	8036.7	8289.8	8289.8
35°	8612.3	8638.9	8500.4	8660.2	8545.7
37.5°	8924.0	8636.3	8545.7	8644.2	8966.7
40°	8996.0	8489.7	8249.9	8479.0	8878.7
42.5°	8782.8	8556.3	8140.6	8529.7	8740.2
45°	8801.5	8532.3	8114.0	8500.4	8753.5
47.5°	8876.1	8694.9	8111.3	8668.2	8836.1
50°	8918.7	8372.4	7898.1	8369.8	8921.4
52.5°	8689.5	7972.7	7357.2	7962.1	8662.9
55°	8177.9	7423.8	6645.7	7367.9	8114.0
57.5°	7607.7	6792.3	5889.0	6747.0	7485.1
60°	6688.4	6000.9	5180.2	5990.2	6693.7
62.5°	5825.0	5348.0	4580.6	5332.0	5763.7
65°	5094.9	4428.7	3986.4	4447.4	5081.6
67.5°	4199.5	3682.6	3248.3	3685.3	4175.6
70°	3448.1	3085.7	2734.0	3061.7	3413.5
72.5°	2704.7	2499.5	2328.9	2491.5	2712.7
75°	2115.8	1979.9	1985.2	2001.2	2129.1
77.5°	1654.8	1585.5	1692.1	1593.5	1641.4
80°	1305.7	1268.4	1414.9	1268.4	1276.4
82.5°	1039.2	1004.6	1121.8	1007.3	1036.6
85°	810.1	788.7	855.4	786.1	788.7
87.5°	607.5	618.2	626.2	620.9	591.6
90°	485.0	516.9	493.0	511.6	477.0
92.5°	426.4	453.0	453.0	461.0	415.7
95°	370.4	397.0	413.0	391.7	367.7
97.5°	322.4	349.1	367.7	349.1	322.4
100°	277.1	295.8	314.4	290.5	271.8
102.5°	231.8	239.8	245.2	239.8	229.2
105°	178.5	170.5	165.2	173.2	178.5
107.5°	125.2	117.2	98.6	117.2	130.6
110°	74.6	69.3	58.6	69.3	79.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	37.3	34.6	34.6	37.3	40.0
115°	13.3	16.0	18.7	16.0	13.3
117.5°	5.3	8.0	8.0	8.0	5.3
120°	5.3	5.3	5.3	5.3	5.3
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)