

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: P294500

Luminaire Tested: **BMK-24-WCL-UNV-L735-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: P294500
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-24-WCL-UNV-L735-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE CLEAR LENS
Light Source: (528) 70 CRI 3500K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26601.0 lumens
Efficiency: N/A
Efficacy: 171.1 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

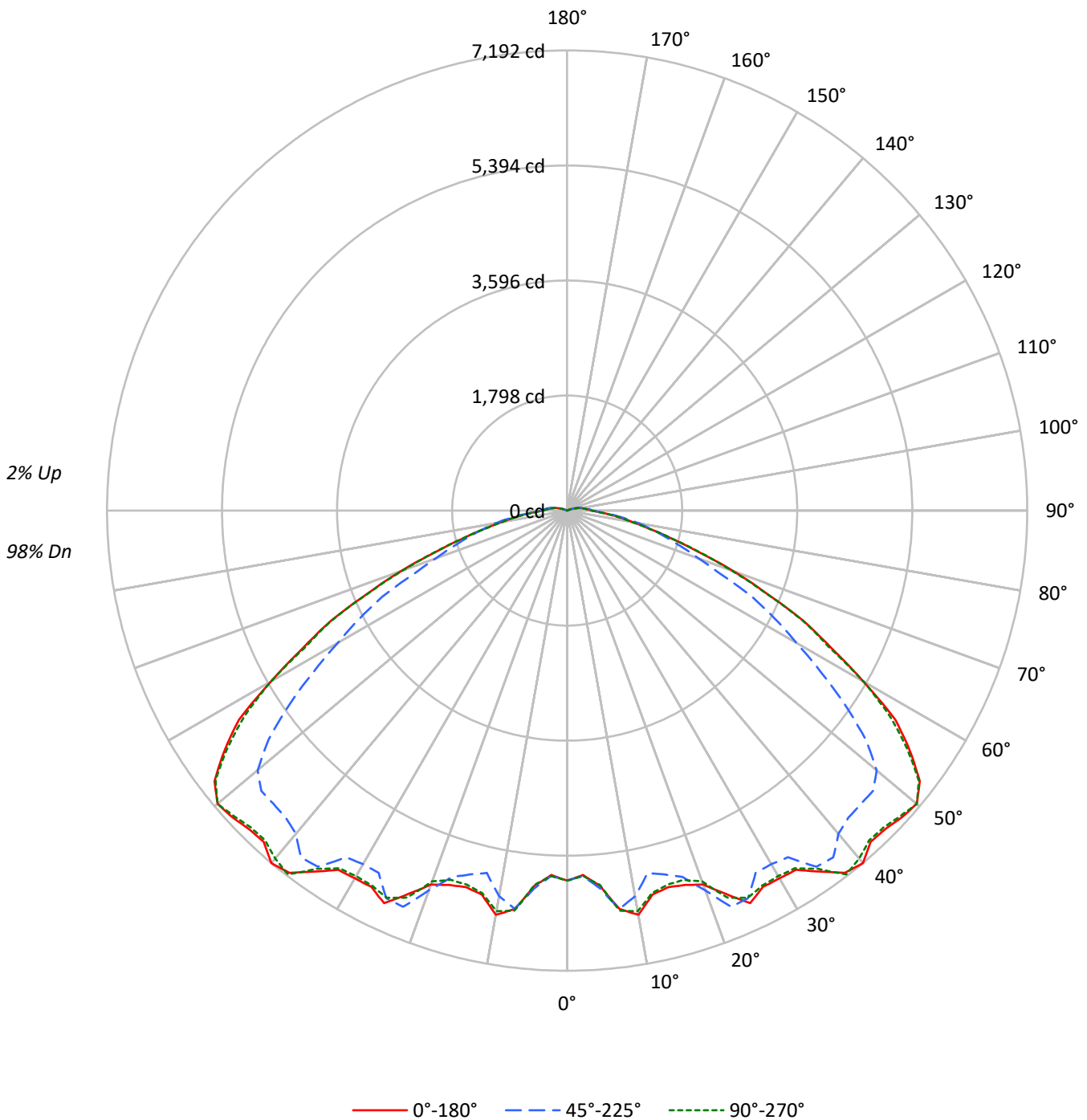
Input Watts (W): 155.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	44590	44590	44590
5°	45081	45408	44966
10°	49179	46909	48738
15°	47121	45540	46808
20°	48893	49664	48474
25°	54554	53867	53816
30°	55266	53119	54928
35°	59802	59024	59340
40°	65790	60334	64933
45°	68536	63182	68162
50°	74867	66301	74889
55°	75078	61012	74491
60°	68322	52914	68375
65°	59160	46288	59005
70°	46792	37100	46322
75°	34857	32706	35076
80°	27636	29949	27016
85°	24227	25585	23591



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	580.9	2.2
10°-20°	1708.9	6.4
20°-30°	2988.1	11.2
30°-40°	4255.1	16.0
40°-50°	5266.7	19.8
50°-60°	5239.0	19.7
60°-70°	3551.0	13.3
70°-80°	1760.9	6.6
80°-90°	734.5	2.8
90°-100°	345.6	1.3
100°-110°	150.2	0.6
110°-120°	19.5	0.1
120°-130°	0.5	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°	5278.0	19.8
0°-40°	9533.1	35.8
0°-60°	20038.8	75.3
0°-90°	26085.2	98.1
90°-120°	515.4	1.9
90°-150°	515.9	1.9
90°-180°	516.0	1.9
0°-180°	26601.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5784	5784	5784	5784	5784	
5°	5886	5863	5929	5888	5871	584
15°	6093	5874	5888	5884	6052	1748
25°	6770	6366	6685	6340	6679	3050
35°	6886	6907	6796	6924	6832	4342
45°	7037	6822	6487	6796	6998	5483
55°	6538	5935	5313	5891	6487	5773
65°	4073	3541	3187	3556	4063	3989
75°	1692	1583	1587	1600	1702	1865
85°	648	631	684	628	631	610
90°	388	413	394	409	381	220
95°	296	317	330	313	294	228
105°	143	136	132	138	143	151
115°	11	13	15	13	11	19
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



TEST NUMBER: P294500

CATALOG NUMBER: BMK-24-WCL-UNV-L735-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5784.1	5784.1	5784.1	5784.1	5784.1
2.5°	5698.9	5722.3	5713.8	5705.3	5713.8
5°	5886.4	5862.9	5929.0	5888.5	5871.4
7.5°	6280.5	6223.0	6276.2	6225.1	6306.0
10°	6414.7	6318.8	6118.6	6295.4	6357.2
12.5°	6148.4	6054.7	5801.1	6071.7	6122.8
15°	6093.0	5873.6	5888.5	5884.2	6052.5
17.5°	6133.5	5871.4	6003.5	5875.7	6052.5
20°	6218.7	6101.5	6316.7	6105.8	6165.4
22.5°	6487.1	6384.9	6702.3	6380.6	6546.8
25°	6770.5	6365.7	6685.3	6340.1	6678.9
27.5°	6629.9	6404.0	6382.7	6378.5	6606.4
30°	6636.3	6474.3	6378.5	6491.4	6595.8
32.5°	6657.6	6604.3	6425.3	6627.7	6627.7
35°	6885.5	6906.8	6796.0	6923.9	6832.3
37.5°	7134.8	6904.7	6832.3	6911.1	7168.9
40°	7192.3	6787.5	6595.8	6779.0	7098.6
42.5°	7021.9	6840.8	6508.4	6819.5	6987.8
45°	7036.8	6821.6	6487.1	6796.0	6998.4
47.5°	7096.4	6951.6	6485.0	6930.3	7064.5
50°	7130.5	6693.8	6314.6	6691.7	7132.6
52.5°	6947.3	6374.2	5882.1	6365.7	6926.0
55°	6538.3	5935.4	5313.3	5890.6	6487.1
57.5°	6082.4	5430.4	4708.2	5394.2	5984.4
60°	5347.4	4797.7	4141.5	4789.2	5351.6
62.5°	4657.1	4275.8	3662.2	4263.0	4608.1
65°	4073.4	3540.8	3187.1	3555.7	4062.7
67.5°	3357.5	2944.2	2597.0	2946.4	3338.4
70°	2756.8	2467.0	2185.8	2447.9	2729.1
72.5°	2162.4	1998.3	1862.0	1991.9	2168.8
75°	1691.6	1582.9	1587.2	1599.9	1702.2
77.5°	1323.0	1267.6	1352.8	1274.0	1312.3
80°	1043.9	1014.1	1131.3	1014.1	1020.5
82.5°	830.9	803.2	896.9	805.3	828.7
85°	647.6	630.6	683.9	628.5	630.6
87.5°	485.7	494.3	500.6	496.4	473.0
90°	387.7	413.3	394.1	409.0	381.3
92.5°	340.9	362.2	362.2	368.6	332.3
95°	296.1	317.4	330.2	313.2	294.0
97.5°	257.8	279.1	294.0	279.1	257.8
100°	221.6	236.5	251.4	232.2	217.3
102.5°	185.3	191.7	196.0	191.7	183.2
105°	142.7	136.3	132.1	138.5	142.7
107.5°	100.1	93.7	78.8	93.7	104.4
110°	59.7	55.4	46.9	55.4	63.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	29.8	27.7	27.7	29.8	32.0
115°	10.7	12.8	14.9	12.8	10.7
117.5°	4.3	6.4	6.4	6.4	4.3
120°	4.3	4.3	4.3	4.3	4.3
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)