

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: P294471

Luminaire Tested: **BMK-30-WFL-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: P294471
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-103-3)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-30-WFL-UNV-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE FROSTED 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: 32325.9 lumens
Efficiency: N/A
Efficacy: 160.7 lumens/watt
Spacing Criteria (0/90/45): 1.7 / 1.7 / 1.72
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

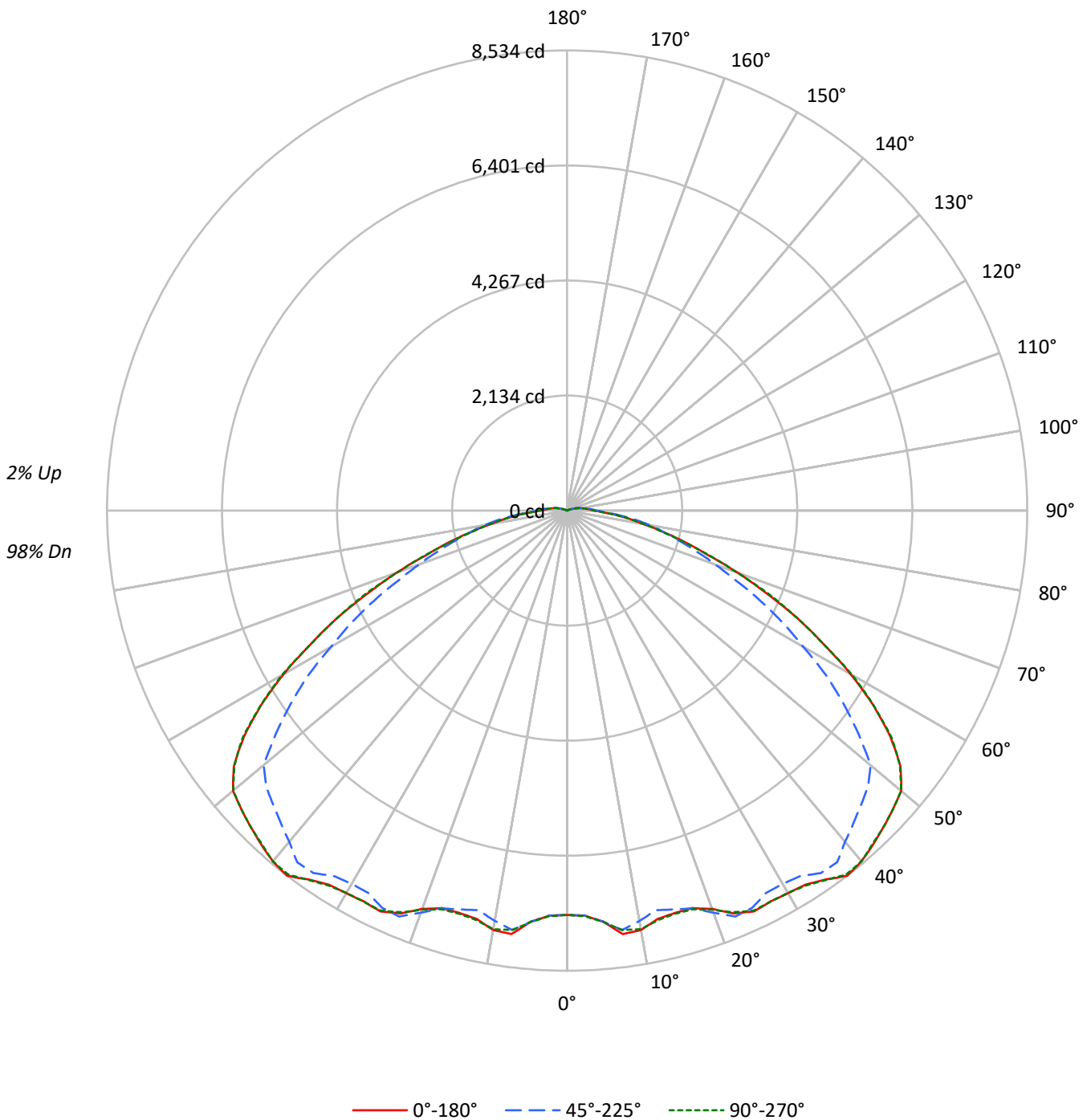
Input Watts (W): 201.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	102	97	93	104	100	95	92	95	91	88	91	88	85	87	84	82	80
2	97	88	81	75	94	86	79	74	82	76	72	78	74	70	75	71	68	65
3	88	77	68	61	85	75	67	60	71	65	59	68	62	58	65	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	43	56	48	42	53	47	41	51	45	41	38
6	67	53	44	37	65	52	43	37	50	42	36	48	41	36	46	40	35	33
7	62	48	38	32	60	47	38	32	45	37	31	43	36	31	42	35	31	29
8	57	43	34	28	56	42	34	28	41	33	28	39	32	27	38	32	27	25
9	53	39	31	25	52	39	30	25	37	30	25	36	29	24	35	29	24	22
10	50	36	28	22	48	35	28	22	34	27	22	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	57806	57806	57806
5°	58587	58629	58622
10°	60555	59244	60412
15°	59734	59224	59851
20°	61813	62395	61933
25°	66077	65474	65948
30°	68234	66556	68159
35°	72555	71262	72624
40°	77679	73350	77662
45°	80826	75116	80835
50°	84924	77122	84878
55°	84057	71880	84384
60°	77669	64655	78101
65°	68279	57409	68215
70°	57020	49564	56642
75°	46656	44270	45684
80°	37955	40928	38429
85°	33168	36067	33669



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	739.3	2.3
10°-20°	2188.3	6.8
20°-30°	3722.3	11.5
30°-40°	5184.0	16.0
40°-50°	6203.0	19.2
50°-60°	6032.0	18.7
60°-70°	4279.3	13.2
70°-80°	2330.4	7.2
80°-90°	1021.4	3.2
90°-100°	424.4	1.3
100°-110°	174.2	0.5
110°-120°	26.8	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°	6649.8	20.6
0°-40°	11833.8	36.6
0°-60°	24068.8	74.5
0°-90°	31699.9	98.1
90°-120°	625.4	1.9
90°-150°	626.1	1.9
90°-180°	626.0	1.9
0°-180°	32325.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7498	7498	7498	7498	7498	
5°	7650	7638	7655	7640	7654	743
15°	7724	7626	7658	7612	7739	2202
25°	8201	7988	8126	7997	8185	3762
35°	8354	8360	8205	8333	8362	5259
45°	8299	8029	7712	8038	8300	6421
55°	7320	6771	6260	6785	7349	6473
65°	4701	4293	3953	4298	4697	4641
75°	2264	2121	2148	2128	2217	2427
85°	887	885	964	892	900	838
90°	494	533	544	532	501	283
95°	362	380	407	385	366	274
105°	158	160	157	160	159	171
115°	14	20	23	19	15	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°	7498.4	7498.4	7498.4	7498.4	7498.4
2.5°	7517.2	7512.7	7518.0	7519.8	7527.9
5°	7649.9	7637.5	7655.3	7640.1	7654.4
7.5°	7921.7	7859.3	7844.2	7839.7	7846.9
10°	7898.5	7854.0	7727.5	7852.2	7879.8
12.5°	7755.1	7708.7	7590.2	7704.3	7780.9
15°	7723.9	7625.9	7657.9	7611.6	7739.0
17.5°	7728.3	7641.0	7730.1	7633.9	7752.4
20°	7862.0	7805.9	7936.0	7799.6	7877.2
22.5°	8084.8	7986.8	8147.2	7956.5	8063.4
25°	8200.6	7988.5	8125.8	7996.6	8184.6
27.5°	8170.3	8029.5	7991.2	8028.6	8174.8
30°	8193.5	8114.2	7992.1	8100.8	8184.6
32.5°	8223.8	8176.6	8038.4	8171.2	8241.6
35°	8353.9	8360.1	8205.1	8333.4	8361.9
37.5°	8533.9	8337.0	8222.0	8323.6	8505.4
40°	8492.0	8227.3	8018.8	8226.5	8490.2
42.5°	8399.3	8155.2	7858.4	8158.7	8384.2
45°	8298.6	8028.6	7712.3	8038.4	8299.5
47.5°	8196.2	7980.5	7568.8	7970.7	8196.2
50°	8088.3	7703.4	7345.2	7705.2	8083.9
52.5°	7795.2	7298.8	6812.3	7298.8	7780.9
55°	7320.2	6771.3	6259.8	6784.7	7348.7
57.5°	6741.0	6257.2	5701.1	6250.9	6748.2
60°	6079.0	5580.8	5060.4	5616.5	6112.8
62.5°	5359.9	5005.2	4512.4	4974.0	5355.4
65°	4701.3	4293.2	3952.8	4297.7	4696.9
67.5°	3990.3	3667.7	3387.9	3662.3	4054.4
70°	3359.4	3090.3	2920.1	3090.3	3337.1
72.5°	2734.7	2598.4	2512.8	2593.0	2765.0
75°	2264.2	2120.8	2148.4	2127.9	2217.0
77.5°	1808.0	1736.7	1839.2	1737.6	1796.4
80°	1433.7	1418.6	1546.0	1414.1	1451.6
82.5°	1149.5	1132.6	1252.9	1127.2	1162.0
85°	886.6	884.8	964.1	892.0	900.0
87.5°	654.9	678.1	714.6	681.7	655.8
90°	494.5	532.9	544.5	532.0	500.8
92.5°	423.3	449.1	466.0	448.2	430.4
95°	361.8	380.5	407.2	384.9	366.2
97.5°	306.5	324.4	343.1	324.4	309.2
100°	254.8	267.3	285.1	269.1	257.5
102.5°	210.3	213.0	221.9	216.5	209.4
105°	157.7	159.5	156.8	160.4	158.6
107.5°	114.1	112.3	105.1	114.9	113.2
110°	71.3	71.3	69.5	72.2	71.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	37.4	40.1	43.7	40.1	39.2
115°	14.3	19.6	23.2	18.7	15.1
117.5°	6.2	8.9	9.8	8.9	6.2
120°	5.3	6.2	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)