

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: P294470

Luminaire Tested: **BMK-30-WFL-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: P294470  
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-L735-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH WIDE FROSTED 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: 31905.0 lumens  
Efficiency: N/A  
Efficacy: 158.7 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

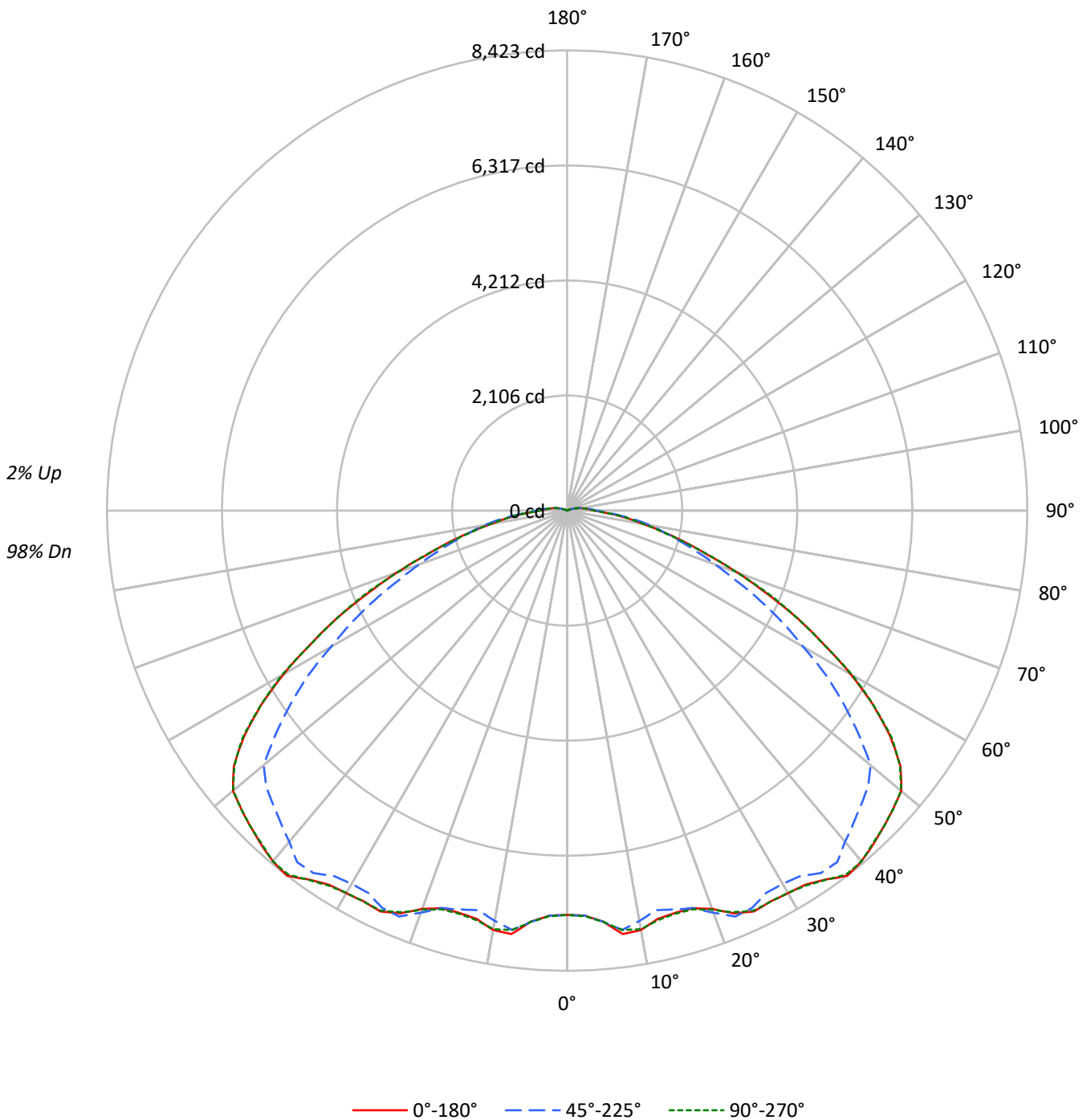
Input Watts (W): 201.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	57053	57053	57053
5°	57824	57865	57858
10°	59767	58472	59625
15°	58956	58453	59071
20°	61008	61582	61126
25°	65216	64621	65089
30°	67345	65689	67272
35°	71610	70334	71679
40°	76667	72395	76651
45°	79774	74138	79782
50°	83818	76117	83772
55°	82963	70945	83285
60°	76657	63813	77084
65°	67391	56662	67327
70°	56277	48917	55903
75°	46048	43693	45088
80°	37463	40396	37928
85°	32738	35600	33232



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	729.7	2.3
10°-20°	2159.8	6.8
20°-30°	3673.8	11.5
30°-40°	5116.4	16.0
40°-50°	6122.3	19.2
50°-60°	5953.5	18.7
60°-70°	4223.6	13.2
70°-80°	2300.0	7.2
80°-90°	1008.1	3.2
90°-100°	418.9	1.3
100°-110°	172.0	0.5
110°-120°	26.5	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°	6563.2	20.6
0°-40°	11679.7	36.6
0°-60°	23755.4	74.5
0°-90°	31287.1	98.1
90°-120°	617.3	1.9
90°-150°	617.9	1.9
90°-180°	618.0	1.9
0°-180°	31905.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7401	7401	7401	7401	7401	
5°	7550	7538	7556	7541	7555	733
15°	7623	7527	7558	7512	7638	2174
25°	8094	7884	8020	7892	8078	3713
35°	8245	8251	8098	8225	8253	5191
45°	8191	7924	7612	7934	8191	6337
55°	7225	6683	6178	6696	7253	6389
65°	4640	4237	3901	4242	4636	4580
75°	2235	2093	2120	2100	2188	2395
85°	875	873	952	880	888	827
90°	488	526	537	525	494	280
95°	357	376	402	380	362	271
105°	156	157	155	158	156	169
115°	14	19	23	18	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°	7400.8	7400.8	7400.8	7400.8	7400.8
2.5°	7419.3	7414.9	7420.1	7421.9	7429.8
5°	7550.3	7538.0	7555.6	7540.6	7554.7
7.5°	7818.5	7757.0	7742.0	7737.6	7744.7
10°	7795.7	7751.7	7626.8	7749.9	7777.2
12.5°	7654.1	7608.3	7491.4	7603.9	7679.6
15°	7623.3	7526.6	7558.2	7512.5	7638.2
17.5°	7627.7	7541.5	7629.5	7534.5	7651.4
20°	7759.6	7704.2	7832.6	7698.1	7774.6
22.5°	7979.5	7882.7	8041.0	7852.8	7958.4
25°	8093.8	7884.5	8019.9	7892.4	8078.0
27.5°	8063.9	7925.0	7887.1	7924.1	8068.3
30°	8086.8	8008.5	7888.0	7995.3	8078.0
32.5°	8116.7	8070.1	7933.8	8064.8	8134.3
35°	8245.1	8251.2	8098.2	8224.9	8253.0
37.5°	8422.7	8228.4	8114.9	8215.2	8394.6
40°	8381.4	8120.2	7914.4	8119.3	8379.6
42.5°	8289.9	8049.0	7756.1	8052.5	8275.0
45°	8190.6	7924.1	7611.9	7933.8	8191.4
47.5°	8089.4	7876.6	7470.3	7866.9	8089.4
50°	7983.0	7603.1	7249.5	7604.8	7978.6
52.5°	7693.7	7203.8	6723.6	7203.8	7679.6
55°	7224.9	6683.1	6178.3	6696.3	7253.0
57.5°	6653.2	6175.7	5626.9	6169.5	6660.3
60°	5999.8	5508.2	4994.5	5543.3	6033.2
62.5°	5290.0	4940.0	4453.7	4909.2	5285.6
65°	4640.1	4237.3	3901.4	4241.7	4635.7
67.5°	3938.3	3619.9	3343.8	3614.6	4001.6
70°	3315.6	3050.0	2882.0	3050.0	3293.6
72.5°	2699.1	2564.6	2480.1	2559.3	2729.0
75°	2234.7	2093.2	2120.4	2100.2	2188.1
77.5°	1784.5	1714.1	1815.2	1715.0	1773.0
80°	1415.1	1400.1	1525.9	1395.7	1432.7
82.5°	1134.5	1117.8	1236.5	1112.5	1146.8
85°	875.1	873.3	951.6	880.4	888.3
87.5°	646.4	669.3	705.3	672.8	647.3
90°	488.1	525.9	537.4	525.0	494.3
92.5°	417.8	443.3	460.0	442.4	424.8
95°	357.1	375.5	401.9	379.9	361.5
97.5°	302.5	320.1	338.6	320.1	305.2
100°	251.5	263.8	281.4	265.6	254.2
102.5°	207.6	210.2	219.0	213.7	206.7
105°	155.7	157.4	154.8	158.3	156.5
107.5°	112.6	110.8	103.8	113.5	111.7
110°	70.4	70.4	68.6	71.2	70.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	36.9	39.6	43.1	39.6	38.7
115°	14.1	19.3	22.9	18.5	15.0
117.5°	6.2	8.8	9.7	8.8	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)