

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: P294473

Luminaire Tested: **BMK-30-WFL-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: P294473  
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-L835-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH WIDE 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: 29678.0 lumens  
Efficiency: N/A  
Efficacy: 147.6 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

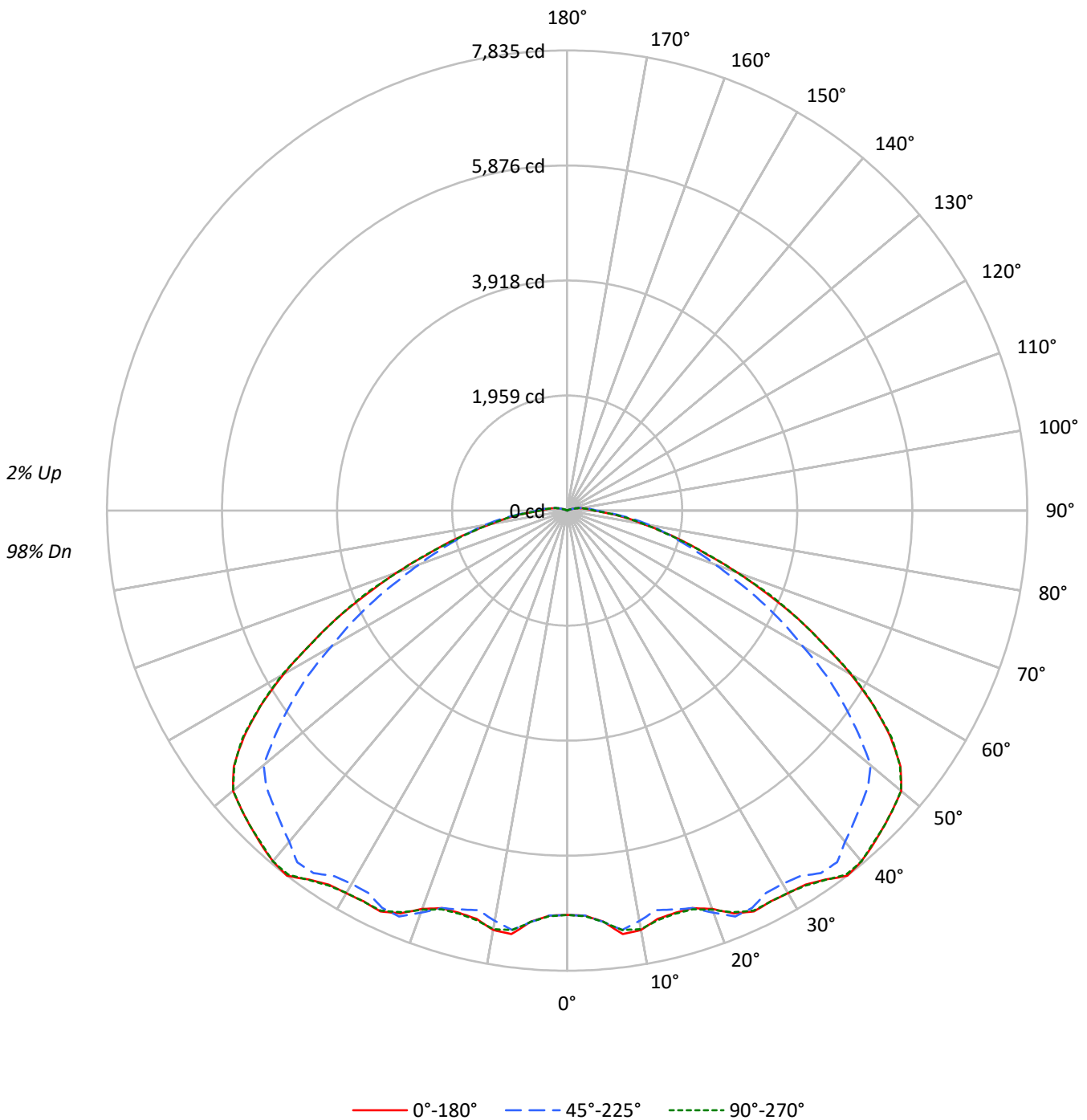
Input Watts (W): 201.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	53071	53071	53071
5°	53788	53826	53820
10°	55595	54391	55463
15°	54841	54372	54949
20°	56750	57284	56859
25°	60664	60110	60545
30°	62644	61104	62576
35°	66612	65425	66675
40°	71316	67342	71301
45°	74205	68962	74214
50°	77968	70804	77925
55°	77172	65993	77473
60°	71306	59359	71704
65°	62686	52706	62627
70°	52349	45504	52001
75°	42836	40643	41942
80°	34847	37576	35281
85°	30452	33116	30912



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	678.7	2.3
10°-20°	2009.0	6.8
20°-30°	3417.3	11.5
30°-40°	4759.3	16.0
40°-50°	5694.9	19.2
50°-60°	5537.9	18.7
60°-70°	3928.8	13.2
70°-80°	2139.5	7.2
80°-90°	937.7	3.2
90°-100°	389.6	1.3
100°-110°	159.9	0.5
110°-120°	24.6	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°	6105.1	20.6
0°-40°	10864.4	36.6
0°-60°	22097.2	74.5
0°-90°	29103.2	98.1
90°-120°	574.2	1.9
90°-150°	574.8	1.9
90°-180°	575.0	1.9
0°-180°	29678.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6884	6884	6884	6884	6884	
5°	7023	7012	7028	7014	7027	682
15°	7091	7001	7031	6988	7105	2022
25°	7529	7334	7460	7342	7514	3454
35°	7670	7675	7533	7651	7677	4828
45°	7619	7371	7080	7380	7620	5895
55°	6721	6217	5747	6229	6747	5943
65°	4316	3942	3629	3946	4312	4261
75°	2079	1947	1972	1954	2035	2228
85°	814	812	885	819	826	770
90°	454	489	500	488	460	260
95°	332	349	374	353	336	252
105°	145	146	144	147	146	157
115°	13	18	21	17	14	22
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°	6884.2	6884.2	6884.2	6884.2	6884.2
2.5°	6901.4	6897.3	6902.2	6903.8	6911.2
5°	7023.3	7011.8	7028.2	7014.3	7027.4
7.5°	7272.8	7215.5	7201.6	7197.5	7204.1
10°	7251.5	7210.6	7094.5	7209.0	7234.3
12.5°	7119.8	7077.3	6968.5	7073.2	7143.5
15°	7091.2	7001.2	7030.6	6988.1	7105.1
17.5°	7095.3	7015.1	7096.9	7008.6	7117.4
20°	7218.0	7166.4	7285.9	7160.7	7231.9
22.5°	7422.5	7332.5	7479.8	7304.7	7402.9
25°	7528.9	7334.2	7460.1	7341.5	7514.1
27.5°	7501.0	7371.8	7336.6	7371.0	7505.1
30°	7522.3	7449.5	7337.4	7437.2	7514.1
32.5°	7550.1	7506.8	7380.0	7501.9	7566.5
35°	7669.6	7675.3	7533.0	7650.8	7676.9
37.5°	7834.8	7654.0	7548.5	7641.8	7808.6
40°	7796.4	7553.4	7362.0	7552.6	7794.7
42.5°	7711.3	7487.1	7214.7	7490.4	7697.4
45°	7618.8	7371.0	7080.5	7380.0	7619.7
47.5°	7524.8	7326.8	6948.8	7317.8	7524.8
50°	7425.8	7072.4	6743.5	7074.0	7421.7
52.5°	7156.6	6701.0	6254.3	6701.0	7143.5
55°	6720.6	6216.6	5747.1	6228.9	6746.8
57.5°	6188.8	5744.6	5234.1	5738.9	6195.4
60°	5581.0	5123.7	4645.9	5156.4	5612.1
62.5°	4920.8	4595.2	4142.8	4566.6	4916.7
65°	4316.2	3941.5	3629.0	3945.6	4312.1
67.5°	3663.4	3367.2	3110.4	3362.3	3722.3
70°	3084.2	2837.1	2680.9	2837.1	3063.7
72.5°	2510.7	2385.5	2307.0	2380.6	2538.5
75°	2078.8	1947.0	1972.4	1953.6	2035.4
77.5°	1659.9	1594.5	1688.5	1595.3	1649.3
80°	1316.3	1302.4	1419.4	1298.3	1332.7
82.5°	1055.3	1039.8	1150.2	1034.9	1066.8
85°	814.0	812.4	885.2	818.9	826.3
87.5°	601.3	622.6	656.1	625.8	602.1
90°	454.0	489.2	499.9	488.4	459.8
92.5°	388.6	412.3	427.9	411.5	395.1
95°	332.1	349.3	373.9	353.4	336.2
97.5°	281.4	297.8	315.0	297.8	283.9
100°	234.0	245.4	261.8	247.1	236.4
102.5°	193.1	195.5	203.7	198.8	192.3
105°	144.8	146.4	144.0	147.3	145.6
107.5°	104.7	103.1	96.5	105.5	103.9
110°	65.4	65.4	63.8	66.3	65.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	34.4	36.8	40.1	36.8	36.0
115°	13.1	18.0	21.3	17.2	13.9
117.5°	5.7	8.2	9.0	8.2	5.7
120°	4.9	5.7	4.9	4.9	4.9
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)