

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: P294485

Luminaire Tested: **BMK-12-WCL-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: P294485
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-12-WCL-UNV-L835-CD-U
Description: BENCHMARK Highbay LED Fixture
WITH WIDE CLEAR 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: 12311.0 lumens
Efficiency: N/A
Efficacy: 165.7 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

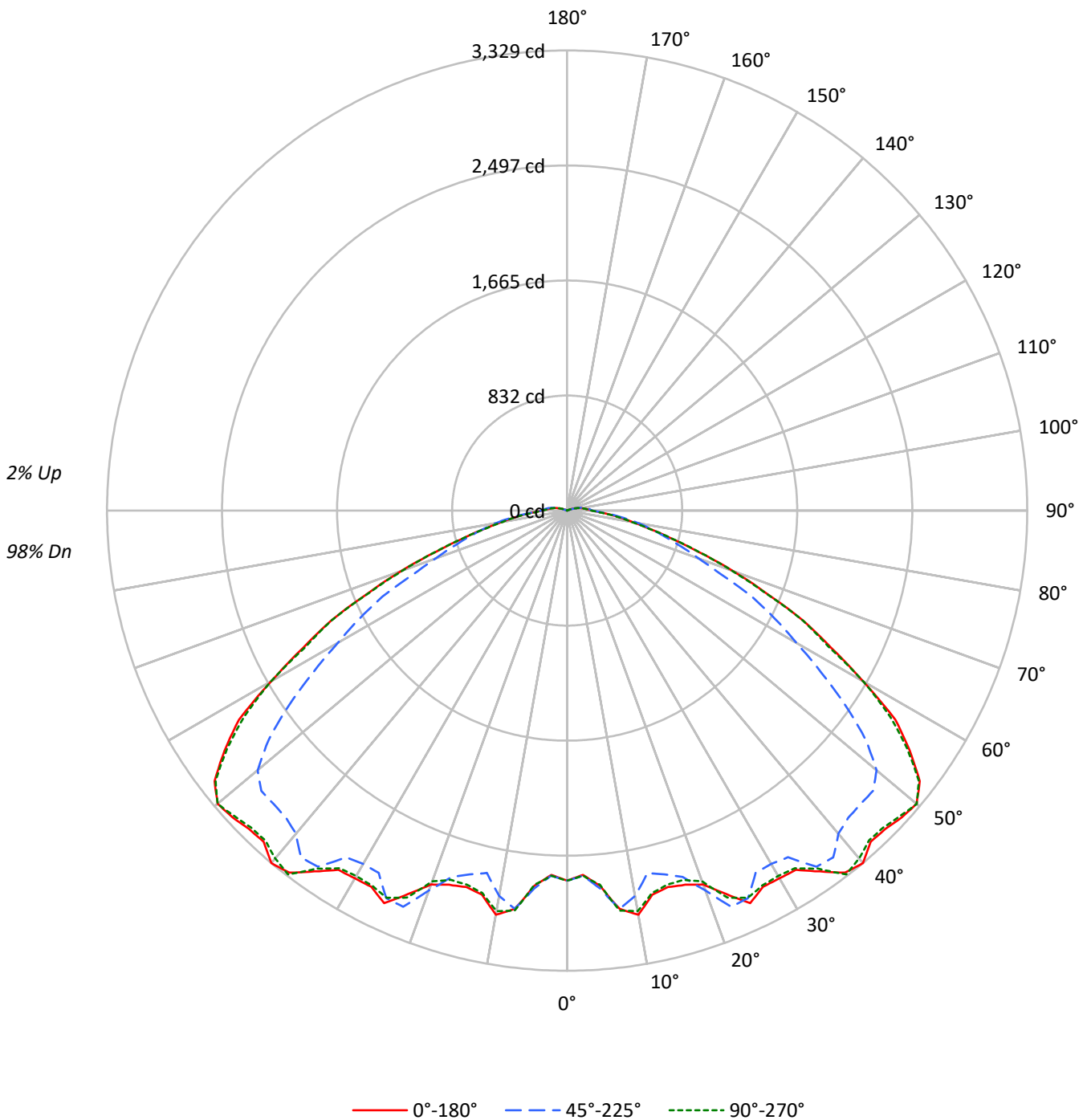
Input Watts (W): 74.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	20636	20636	20636
5°	20863	21014	20811
10°	22760	21710	22556
15°	21808	21076	21663
20°	22628	22985	22434
25°	25248	24930	24906
30°	25577	24584	25421
35°	27676	27317	27462
40°	30448	27922	30051
45°	31718	29242	31546
50°	34649	30684	34659
55°	34746	28236	34475
60°	31620	24489	31644
65°	27380	21422	27307
70°	21655	17170	21437
75°	16132	15135	16233
80°	12789	13859	12503
85°	11212	11840	10916



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	268.9	2.2
10°-20°	790.9	6.4
20°-30°	1382.9	11.2
30°-40°	1969.3	16.0
40°-50°	2437.4	19.8
50°-60°	2424.6	19.7
60°-70°	1643.4	13.3
70°-80°	814.9	6.6
80°-90°	339.9	2.8
90°-100°	160.0	1.3
100°-110°	69.5	0.6
110°-120°	9.0	0.1
120°-130°	0.2	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°	2442.7	19.8
0°-40°	4411.9	35.8
0°-60°	9274.0	75.3
0°-90°	12072.2	98.1
90°-120°	238.5	1.9
90°-150°	238.7	1.9
90°-180°	239.0	1.9
0°-180°	12311.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2677	2677	2677	2677	2677	
5°	2724	2713	2744	2725	2717	270
15°	2820	2718	2725	2723	2801	809
25°	3133	2946	3094	2934	3091	1412
35°	3187	3196	3145	3204	3162	2010
45°	3257	3157	3002	3145	3239	2537
55°	3026	2747	2459	2726	3002	2672
65°	1885	1639	1475	1646	1880	1846
75°	783	733	734	740	788	863
85°	300	292	316	291	292	282
90°	179	191	182	189	176	102
95°	137	147	153	145	136	105
105°	66	63	61	64	66	70
115°	5	6	7	6	5	9
125°	0	0	0	0	0	0
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°	2676.9	2676.9	2676.9	2676.9	2676.9
2.5°	2637.5	2648.3	2644.4	2640.4	2644.4
5°	2724.2	2713.4	2743.9	2725.2	2717.3
7.5°	2906.6	2880.0	2904.6	2881.0	2918.5
10°	2968.7	2924.4	2831.7	2913.5	2942.1
12.5°	2845.5	2802.1	2684.8	2810.0	2833.7
15°	2819.9	2718.3	2725.2	2723.2	2801.1
17.5°	2838.6	2717.3	2778.4	2719.3	2801.1
20°	2878.0	2823.8	2923.4	2825.8	2853.4
22.5°	3002.3	2954.9	3101.8	2953.0	3029.9
25°	3133.4	2946.1	3094.0	2934.2	3091.0
27.5°	3068.3	2963.8	2953.9	2952.0	3057.5
30°	3071.3	2996.3	2952.0	3004.2	3052.5
32.5°	3081.1	3056.5	2973.7	3067.3	3067.3
35°	3186.6	3196.5	3145.2	3204.4	3162.0
37.5°	3302.0	3195.5	3162.0	3198.5	3317.8
40°	3328.6	3141.3	3052.5	3137.3	3285.2
42.5°	3249.7	3165.9	3012.1	3156.1	3234.0
45°	3256.6	3157.1	3002.3	3145.2	3238.9
47.5°	3284.2	3217.2	3001.3	3207.3	3269.5
50°	3300.0	3097.9	2922.4	3096.9	3301.0
52.5°	3215.2	2950.0	2722.2	2946.1	3205.4
55°	3025.9	2746.9	2459.0	2726.2	3002.3
57.5°	2814.9	2513.2	2179.0	2496.5	2769.6
60°	2474.8	2220.4	1916.7	2216.4	2476.7
62.5°	2155.3	1978.8	1694.9	1972.9	2132.6
65°	1885.2	1638.7	1475.0	1645.6	1880.2
67.5°	1553.9	1362.6	1201.9	1363.6	1545.0
70°	1275.8	1141.7	1011.6	1132.9	1263.0
72.5°	1000.8	924.8	861.7	921.9	1003.7
75°	782.9	732.6	734.5	740.5	787.8
77.5°	612.3	586.6	626.1	589.6	607.4
80°	483.1	469.3	523.5	469.3	472.3
82.5°	384.5	371.7	415.1	372.7	383.5
85°	299.7	291.8	316.5	290.9	291.8
87.5°	224.8	228.7	231.7	229.7	218.9
90°	179.4	191.3	182.4	189.3	176.5
92.5°	157.8	167.6	167.6	170.6	153.8
95°	137.0	146.9	152.8	144.9	136.1
97.5°	119.3	129.2	136.1	129.2	119.3
100°	102.5	109.4	116.3	107.5	100.6
102.5°	85.8	88.7	90.7	88.7	84.8
105°	66.1	63.1	61.1	64.1	66.1
107.5°	46.3	43.4	36.5	43.4	48.3
110°	27.6	25.6	21.7	25.6	29.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	13.8	12.8	12.8	13.8	14.8
115°	4.9	5.9	6.9	5.9	4.9
117.5°	2.0	3.0	3.0	3.0	2.0
120°	2.0	2.0	2.0	2.0	2.0
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)