

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: P294482

Luminaire Tested: **BMK-12-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: P294482
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-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: 13235.0 lumens
Efficiency: N/A
Efficacy: 178.1 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

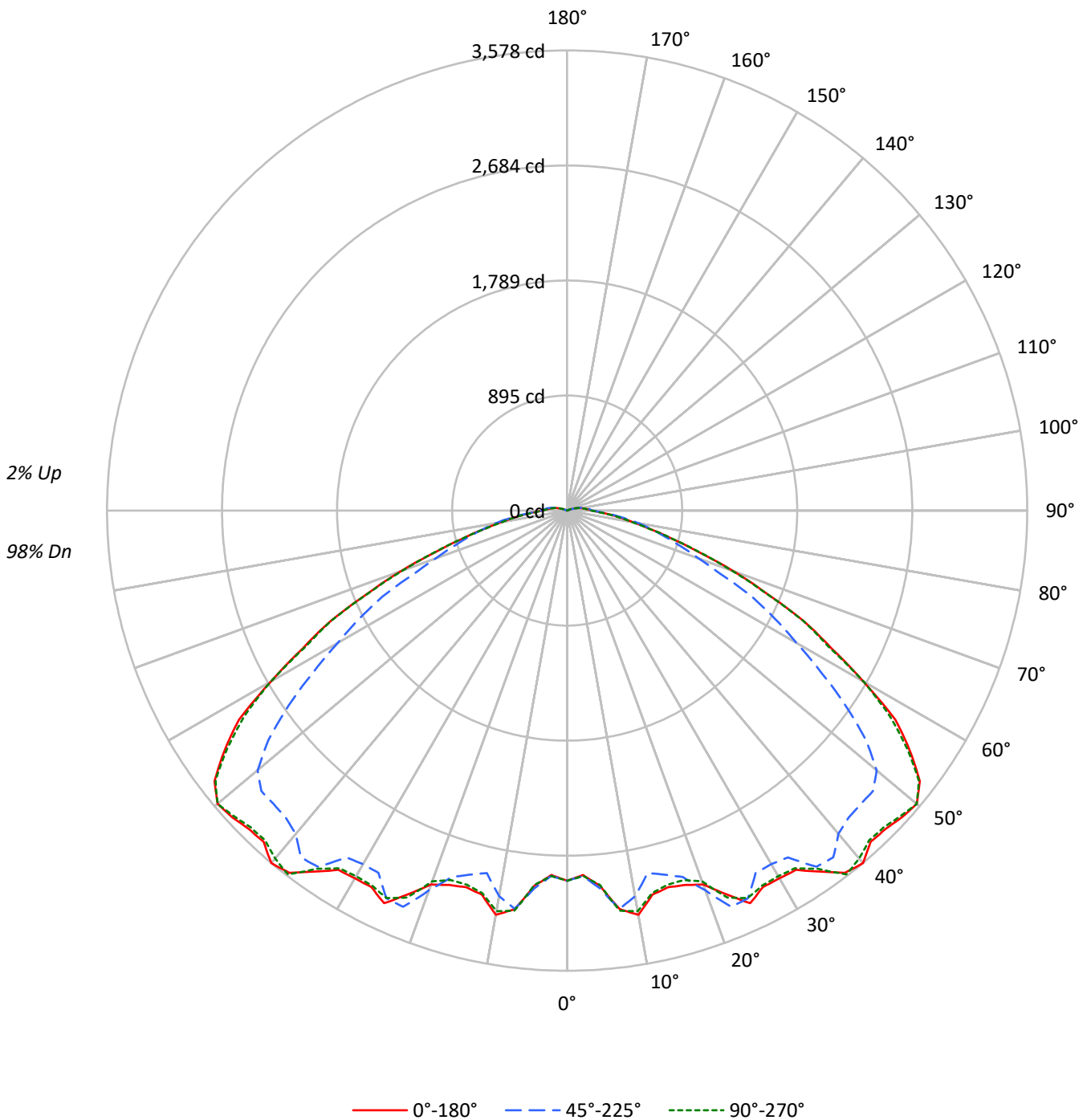
Input Watts (W): 74.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	22185	22185	22185
5°	22430	22592	22373
10°	24469	23339	24249
15°	23445	22657	23289
20°	24326	24710	24117
25°	27143	26801	26775
30°	27497	26428	27329
35°	29754	29367	29523
40°	32733	30019	32306
45°	34100	31436	33914
50°	37249	32987	37261
55°	37354	30356	37062
60°	33992	26328	34019
65°	29435	23030	29358
70°	23281	18459	23046
75°	17342	16273	17451
80°	13750	14899	13441
85°	12054	12727	11736



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.0	2.2
10°-20°	850.2	6.4
20°-30°	1486.7	11.2
30°-40°	2117.1	16.0
40°-50°	2620.4	19.8
50°-60°	2606.6	19.7
60°-70°	1766.8	13.3
70°-80°	876.1	6.6
80°-90°	365.4	2.8
90°-100°	172.0	1.3
100°-110°	74.7	0.6
110°-120°	9.7	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°	2626.0	19.8
0°-40°	4743.1	35.8
0°-60°	9970.0	75.3
0°-90°	12978.3	98.1
90°-120°	256.4	1.9
90°-150°	256.7	1.9
90°-180°	257.0	1.9
0°-180°	13235.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2878	2878	2878	2878	2878	
5°	2929	2917	2950	2930	2921	291
15°	3032	2922	2930	2928	3011	870
25°	3369	3167	3326	3154	3323	1518
35°	3426	3436	3381	3445	3399	2160
45°	3501	3394	3228	3381	3482	2728
55°	3253	2953	2644	2931	3228	2872
65°	2027	1762	1586	1769	2021	1985
75°	842	788	790	796	847	928
85°	322	314	340	313	314	304
90°	193	206	196	204	190	109
95°	147	158	164	156	146	113
105°	71	68	66	69	71	75
115°	5	6	7	6	5	10
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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CATALOG NUMBER: BMK-12-WCL-UNV-L735-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2877.8	2877.8	2877.8	2877.8	2877.8
2.5°	2835.4	2847.1	2842.8	2838.6	2842.8
5°	2928.7	2917.0	2949.9	2929.7	2921.3
7.5°	3124.8	3096.2	3122.7	3097.2	3137.5
10°	3191.6	3143.9	3044.2	3132.2	3162.9
12.5°	3059.1	3012.4	2886.3	3020.9	3046.3
15°	3031.5	2922.3	2929.7	2927.6	3011.4
17.5°	3051.6	2921.3	2987.0	2923.4	3011.4
20°	3094.0	3035.7	3142.8	3037.9	3067.5
22.5°	3227.6	3176.7	3334.6	3174.6	3257.3
25°	3368.6	3167.2	3326.2	3154.5	3323.0
27.5°	3298.6	3186.3	3175.7	3173.5	3287.0
30°	3301.8	3221.2	3173.5	3229.7	3281.7
32.5°	3312.4	3285.9	3196.9	3297.5	3297.5
35°	3425.8	3436.4	3381.3	3444.9	3399.3
37.5°	3549.8	3435.3	3399.3	3438.5	3566.8
40°	3578.4	3377.0	3281.7	3372.8	3531.8
42.5°	3493.6	3403.5	3238.2	3392.9	3476.7
45°	3501.1	3394.0	3227.6	3381.3	3482.0
47.5°	3530.7	3458.7	3226.5	3448.1	3514.8
50°	3547.7	3330.4	3141.7	3329.3	3548.8
52.5°	3456.5	3171.4	2926.6	3167.2	3445.9
55°	3253.0	2953.1	2643.6	2930.8	3227.6
57.5°	3026.2	2701.8	2342.5	2683.8	2977.4
60°	2660.5	2387.0	2060.6	2382.8	2662.6
62.5°	2317.1	2127.3	1822.1	2121.0	2292.7
65°	2026.7	1761.7	1585.7	1769.1	2021.4
67.5°	1670.5	1464.9	1292.1	1465.9	1661.0
70°	1371.6	1227.4	1087.5	1217.9	1357.8
72.5°	1075.9	994.2	926.4	991.1	1079.0
75°	841.6	787.6	789.7	796.0	846.9
77.5°	658.2	630.7	673.1	633.9	652.9
80°	519.4	504.5	562.8	504.5	507.7
82.5°	413.4	399.6	446.2	400.7	412.3
85°	322.2	313.7	340.2	312.7	313.7
87.5°	241.7	245.9	249.1	247.0	235.3
90°	192.9	205.6	196.1	203.5	189.7
92.5°	169.6	180.2	180.2	183.4	165.4
95°	147.3	157.9	164.3	155.8	146.3
97.5°	128.3	138.9	146.3	138.9	128.3
100°	110.2	117.7	125.1	115.5	108.1
102.5°	92.2	95.4	97.5	95.4	91.2
105°	71.0	67.8	65.7	68.9	71.0
107.5°	49.8	46.6	39.2	46.6	51.9
110°	29.7	27.6	23.3	27.6	31.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	14.8	13.8	13.8	14.8	15.9
115°	5.3	6.4	7.4	6.4	5.3
117.5°	2.1	3.2	3.2	3.2	2.1
120°	2.1	2.1	2.1	2.1	2.1
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)