

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: P294490

Luminaire Tested: **BMK-15-WCL-UNV-L750-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: P294490  
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-15-WCL-UNV-L750-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH WIDE CLEAR LENS  
Light Source: (528) 70 CRI 5000K LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17059.0 lumens  
Efficiency: N/A  
Efficacy: 181.9 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

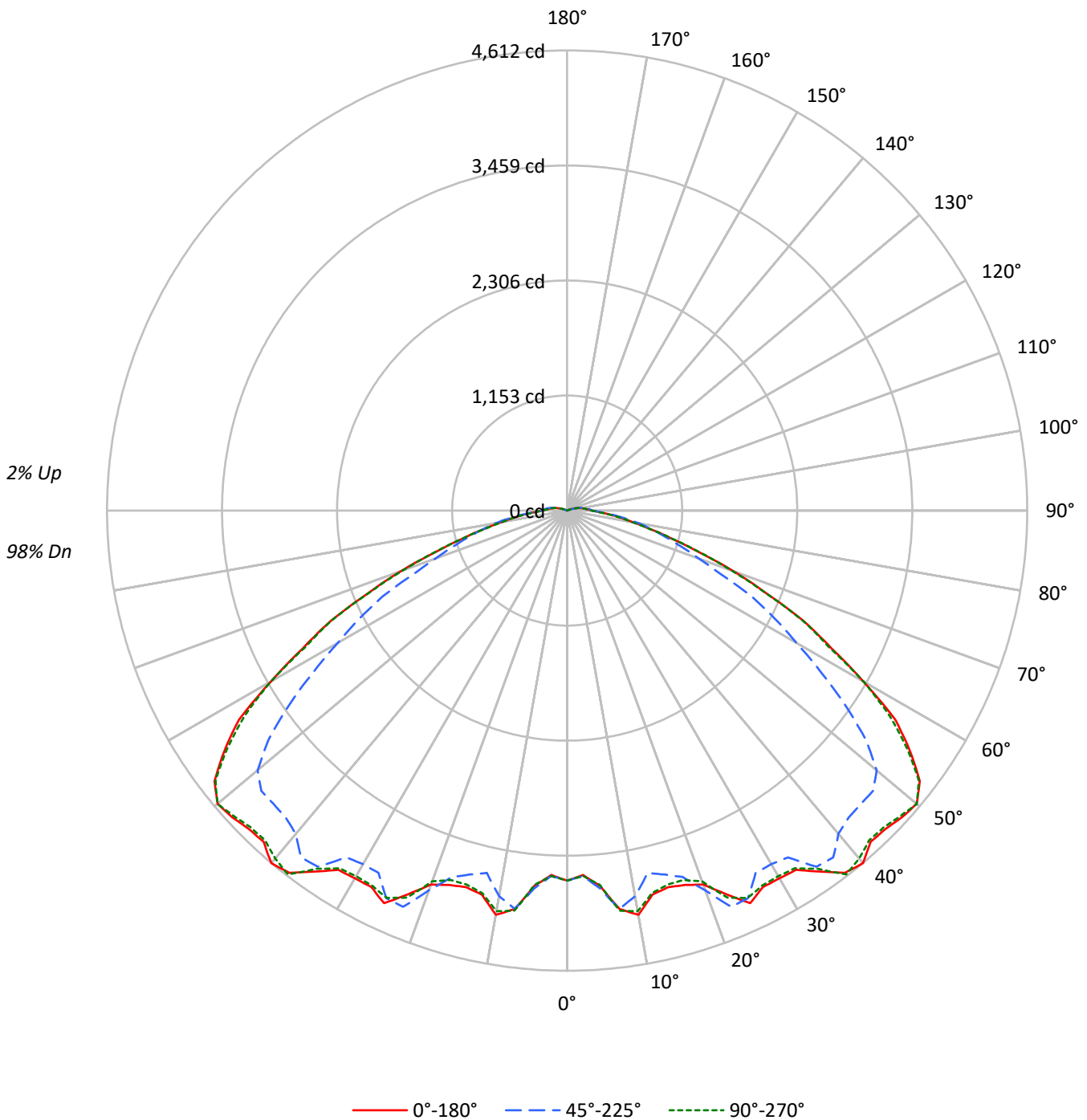
Input Watts (W): 93.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	28595	28595	28595
5°	28910	29119	28837
10°	31538	30082	31255
15°	30219	29204	30018
20°	31355	31848	31086
25°	34985	34544	34511
30°	35441	34065	35225
35°	38350	37852	38054
40°	42191	38691	41640
45°	43951	40518	43712
50°	48011	42518	48026
55°	48147	39127	47770
60°	43814	33933	43848
65°	37938	29685	37840
70°	30007	23792	29705
75°	22353	20973	22494
80°	17721	19206	17324
85°	15537	16408	15129



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	372.6	2.2
10°-20°	1095.9	6.4
20°-30°	1916.3	11.2
30°-40°	2728.8	16.0
40°-50°	3377.5	19.8
50°-60°	3359.7	19.7
60°-70°	2277.2	13.3
70°-80°	1129.2	6.6
80°-90°	471.0	2.8
90°-100°	221.7	1.3
100°-110°	96.4	0.6
110°-120°	12.5	0.1
120°-130°	0.3	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°	3384.7	19.8
0°-40°	6113.5	35.8
0°-60°	12850.7	75.3
0°-90°	16728.2	98.1
90°-120°	330.5	1.9
90°-150°	330.8	1.9
90°-180°	331.0	1.9
0°-180°	17059.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3709	3709	3709	3709	3709	
5°	3775	3760	3802	3776	3765	375
15°	3907	3767	3776	3774	3881	1121
25°	4342	4082	4287	4066	4283	1956
35°	4416	4429	4358	4440	4382	2785
45°	4513	4375	4160	4358	4488	3516
55°	4193	3806	3407	3778	4160	3702
65°	2612	2271	2044	2280	2605	2558
75°	1085	1015	1018	1026	1092	1196
85°	415	404	439	403	404	391
90°	249	265	253	262	245	141
95°	190	204	212	201	188	146
105°	92	87	85	89	92	97
115°	7	8	10	8	7	12
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°	3709.3	3709.3	3709.3	3709.3	3709.3
2.5°	3654.6	3669.7	3664.2	3658.7	3664.2
5°	3774.9	3759.8	3802.2	3776.2	3765.3
7.5°	4027.6	3990.7	4024.9	3992.1	4044.0
10°	4113.7	4052.2	3923.8	4037.2	4076.8
12.5°	3942.9	3882.8	3720.2	3893.7	3926.5
15°	3907.4	3766.7	3776.2	3773.5	3881.4
17.5°	3933.4	3765.3	3850.0	3768.0	3881.4
20°	3988.0	3912.9	4050.8	3915.6	3953.8
22.5°	4160.1	4094.6	4298.1	4091.8	4198.4
25°	4341.9	4082.3	4287.2	4065.9	4283.1
27.5°	4251.7	4106.9	4093.2	4090.5	4236.7
30°	4255.8	4151.9	4090.5	4162.9	4229.8
32.5°	4269.4	4235.3	4120.5	4250.3	4250.3
35°	4415.6	4429.3	4358.2	4440.2	4381.5
37.5°	4575.5	4427.9	4381.5	4432.0	4597.3
40°	4612.4	4352.8	4229.8	4347.3	4552.2
42.5°	4503.1	4386.9	4173.8	4373.3	4481.2
45°	4512.6	4374.6	4160.1	4358.2	4488.0
47.5°	4550.9	4458.0	4158.8	4444.3	4530.4
50°	4572.7	4292.7	4049.5	4291.3	4574.1
52.5°	4455.2	4087.7	3772.1	4082.3	4441.6
55°	4192.9	3806.3	3407.4	3777.6	4160.1
57.5°	3900.6	3482.5	3019.3	3459.3	3837.7
60°	3429.2	3076.7	2655.9	3071.3	3431.9
62.5°	2986.6	2742.0	2348.5	2733.8	2955.1
65°	2612.2	2270.7	2043.9	2280.2	2605.4
67.5°	2153.2	1888.1	1665.4	1889.5	2140.9
70°	1767.9	1582.1	1401.7	1569.8	1750.1
72.5°	1386.7	1281.5	1194.1	1277.4	1390.8
75°	1084.8	1015.1	1017.8	1026.0	1091.6
77.5°	848.4	812.9	867.6	817.0	841.6
80°	669.4	650.3	725.5	650.3	654.4
82.5°	532.8	515.1	575.2	516.4	531.5
85°	415.3	404.4	438.6	403.0	404.4
87.5°	311.5	317.0	321.1	318.3	303.3
90°	248.7	265.0	252.8	262.3	244.6
92.5°	218.6	232.3	232.3	236.4	213.1
95°	189.9	203.6	211.8	200.8	188.5
97.5°	165.3	179.0	188.5	179.0	165.3
100°	142.1	151.7	161.2	148.9	139.4
102.5°	118.9	123.0	125.7	123.0	117.5
105°	91.5	87.4	84.7	88.8	91.5
107.5°	64.2	60.1	50.6	60.1	66.9
110°	38.3	35.5	30.1	35.5	41.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	19.1	17.8	17.8	19.1	20.5
115°	6.8	8.2	9.6	8.2	6.8
117.5°	2.7	4.1	4.1	4.1	2.7
120°	2.7	2.7	2.7	2.7	2.7
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)