

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: P294512

Luminaire Tested: **BMK-36-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: P294512  
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-36-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: 39112.0 lumens  
Efficiency: N/A  
Efficacy: 161.0 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

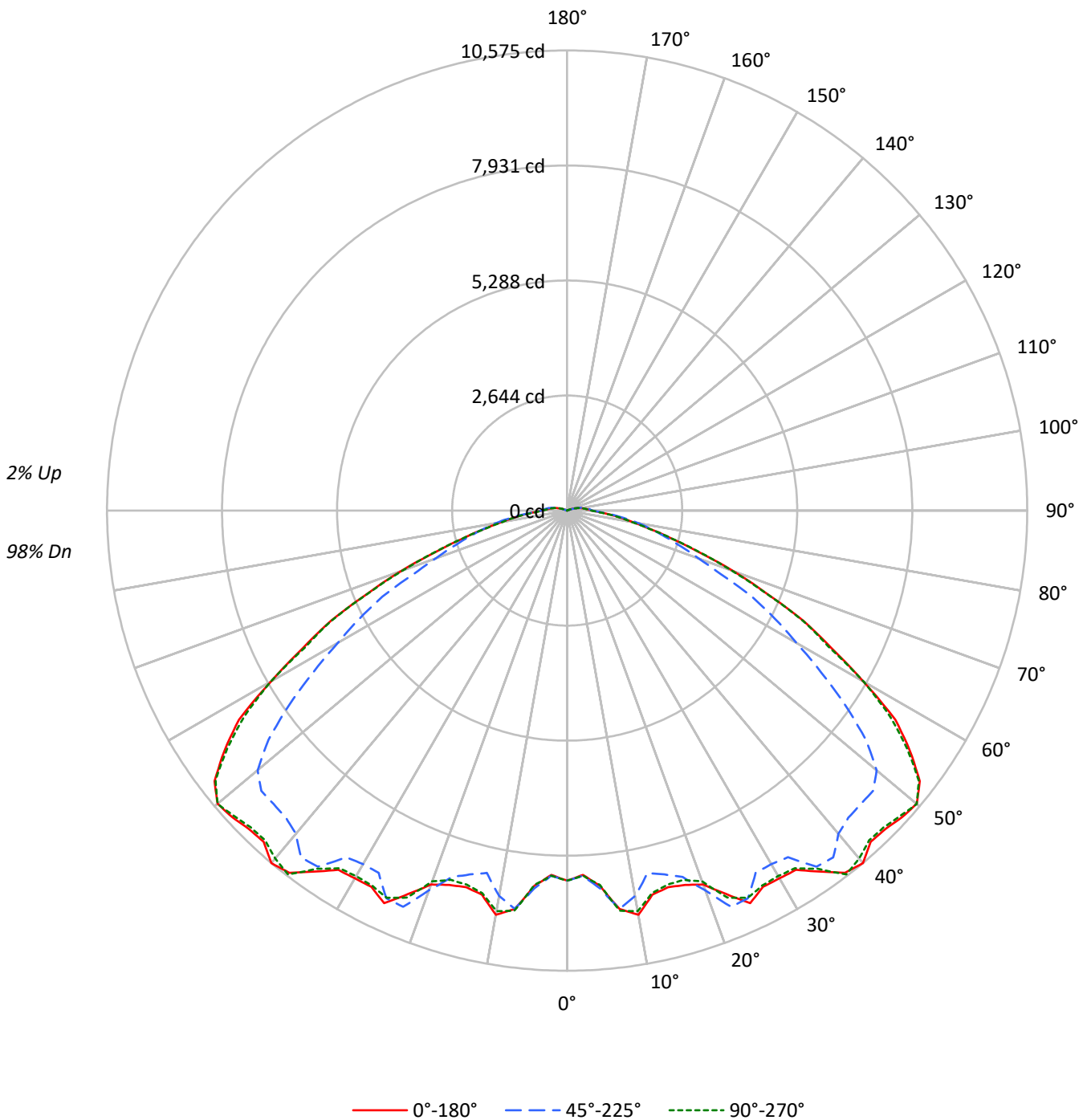
Input Watts (W): 243  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	65562	65562	65562
5°	66283	66763	66116
10°	72310	68971	71661
15°	69284	66958	68824
20°	71889	73022	71273
25°	80211	79202	79126
30°	81257	78101	80762
35°	87928	86785	87248
40°	96733	88710	95472
45°	100770	92899	100221
50°	110079	97482	110112
55°	110388	89706	109526
60°	100454	77802	100534
65°	86984	68059	86756
70°	68798	54549	68107
75°	51249	48086	51573
80°	40634	44033	39721
85°	35626	37616	34687



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	854.2	2.2
10°-20°	2512.6	6.4
20°-30°	4393.5	11.2
30°-40°	6256.4	16.0
40°-50°	7743.7	19.8
50°-60°	7703.0	19.7
60°-70°	5221.1	13.3
70°-80°	2589.0	6.6
80°-90°	1080.0	2.8
90°-100°	508.2	1.3
100°-110°	220.9	0.6
110°-120°	28.6	0.1
120°-130°	0.7	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°	7760.3	19.8
0°-40°	14016.7	35.8
0°-60°	29463.4	75.3
0°-90°	38353.5	98.1
90°-120°	757.7	1.9
90°-150°	758.5	1.9
90°-180°	758.0	1.9
0°-180°	39112.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8504	8504	8504	8504	8504	
5°	8655	8620	8718	8658	8633	859
15°	8959	8636	8658	8652	8899	2570
25°	9955	9360	9830	9322	9820	4485
35°	10124	10155	9992	10180	10046	6384
45°	10346	10030	9538	9992	10290	8061
55°	9613	8727	7812	8661	9538	8488
65°	5989	5206	4686	5228	5974	5865
75°	2487	2327	2334	2352	2503	2742
85°	952	927	1006	924	927	898
90°	570	608	580	601	561	323
95°	435	467	486	460	432	335
105°	210	200	194	204	210	222
115°	16	19	22	19	16	29
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°	8504.5	8504.5	8504.5	8504.5	8504.5
2.5°	8379.2	8413.6	8401.1	8388.6	8401.1
5°	8654.8	8620.4	8717.5	8658.0	8632.9
7.5°	9234.3	9149.7	9228.1	9152.9	9271.9
10°	9431.7	9290.7	8996.3	9256.2	9347.1
12.5°	9040.1	8902.3	8529.5	8927.3	9002.5
15°	8958.7	8636.0	8658.0	8651.7	8899.2
17.5°	9018.2	8632.9	8827.1	8639.2	8899.2
20°	9143.5	8971.2	9287.6	8977.5	9065.2
22.5°	9538.2	9387.8	9854.5	9381.5	9625.9
25°	9954.8	9359.6	9829.5	9322.0	9820.1
27.5°	9748.0	9416.0	9384.7	9378.4	9713.6
30°	9757.4	9519.4	9378.4	9544.4	9697.9
32.5°	9788.8	9710.4	9447.3	9744.9	9744.9
35°	10123.9	10155.2	9992.4	10180.3	10045.6
37.5°	10490.4	10152.1	10045.6	10161.5	10540.5
40°	10575.0	9979.8	9697.9	9967.3	10437.2
42.5°	10324.4	10058.1	9569.5	10026.8	10274.3
45°	10346.3	10029.9	9538.2	9992.4	10289.9
47.5°	10434.0	10221.0	9535.0	10189.7	10387.0
50°	10484.1	9842.0	9284.4	9838.9	10487.3
52.5°	10214.8	9372.1	8648.6	9359.6	10183.4
55°	9613.3	8726.9	7812.2	8661.1	9538.2
57.5°	8943.0	7984.5	6922.6	7931.2	8798.9
60°	7862.3	7054.2	6089.4	7041.6	7868.6
62.5°	6847.4	6286.7	5384.6	6267.9	6775.4
65°	5989.2	5206.1	4686.1	5228.0	5973.5
67.5°	4936.7	4329.0	3818.4	4332.1	4908.5
70°	4053.3	3627.3	3213.8	3599.1	4012.6
72.5°	3179.4	2938.2	2737.7	2928.8	3188.8
75°	2487.1	2327.4	2333.6	2352.4	2502.8
77.5°	1945.2	1863.8	1989.1	1873.2	1929.6
80°	1534.9	1491.0	1663.3	1491.0	1500.4
82.5°	1221.6	1180.9	1318.7	1184.0	1218.5
85°	952.3	927.2	1005.5	924.1	927.2
87.5°	714.2	726.7	736.1	729.8	695.4
90°	570.1	607.7	579.5	601.4	560.7
92.5°	501.2	532.5	532.5	541.9	488.7
95°	435.4	466.7	485.5	460.5	432.3
97.5°	379.0	410.3	432.3	410.3	379.0
100°	325.8	347.7	369.6	341.4	319.5
102.5°	272.5	281.9	288.2	281.9	269.4
105°	209.9	200.5	194.2	203.6	209.9
107.5°	147.2	137.8	115.9	137.8	153.5
110°	87.7	81.4	68.9	81.4	94.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	43.9	40.7	40.7	43.9	47.0
115°	15.7	18.8	21.9	18.8	15.7
117.5°	6.3	9.4	9.4	9.4	6.3
120°	6.3	6.3	6.3	6.3	6.3
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)