

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: P295479

Luminaire Tested: **BMK-36-MFL-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: P295479  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-251-3)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: BMK-36-MFL-UNV-L835-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH MEDIUM 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: 34819.0 lumens  
Efficiency: N/A  
Efficacy: 143.3 lumens/watt  
Spacing Criteria (0/90/45): 1.33 / 1.33 / 1.36  
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')  
CIE Type: Direct

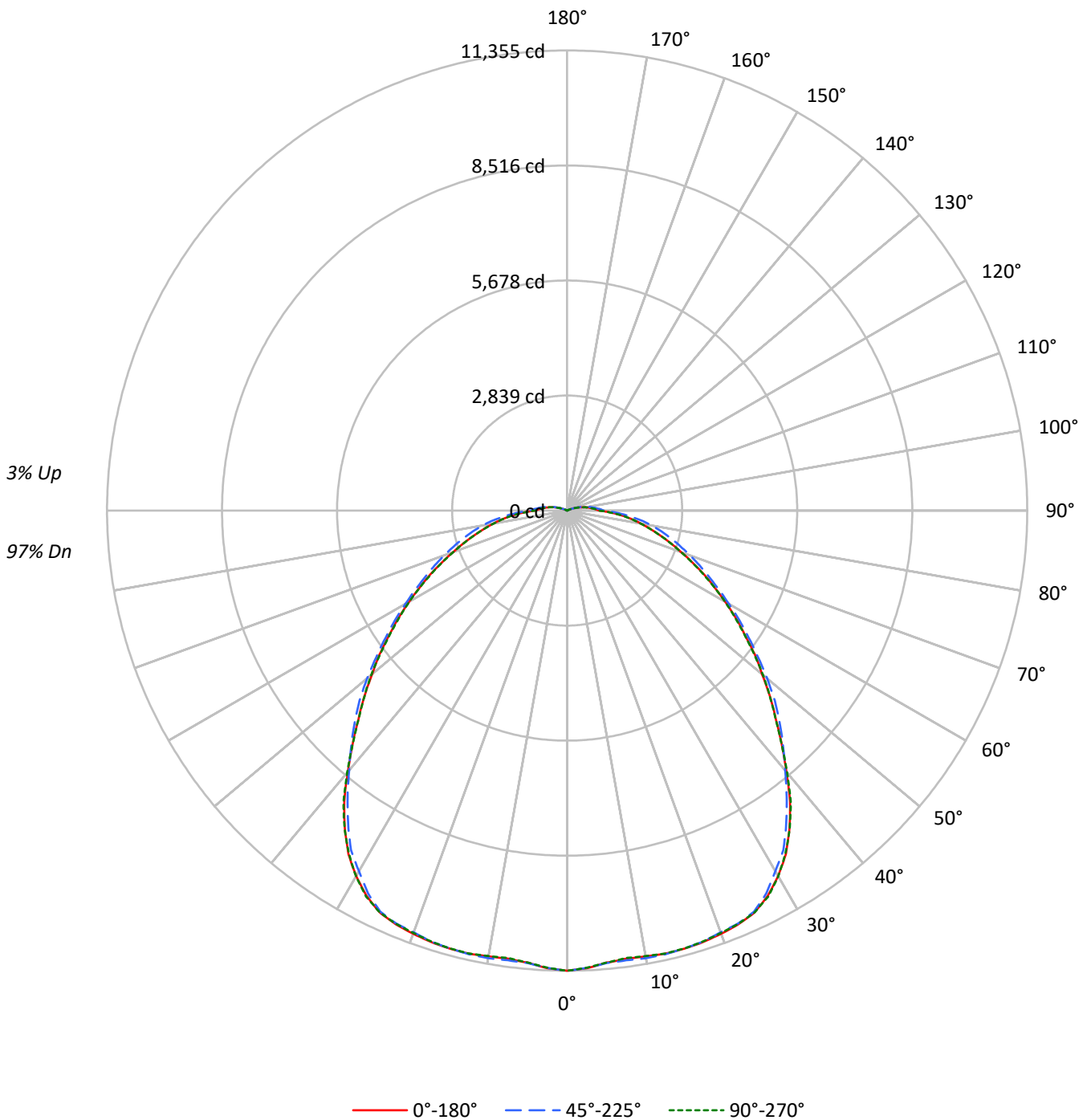
Input Watts (W): 243  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	97
1	107	102	97	93	104	99	95	91	94	91	88	90	87	84	86	83	81	79
2	97	89	81	75	94	86	80	74	82	77	72	78	74	70	75	71	68	65
3	89	78	69	63	86	76	68	62	72	66	60	69	64	59	66	62	58	55
4	81	69	60	53	79	67	59	53	64	57	52	62	56	51	59	54	49	47
5	75	62	53	46	72	60	52	45	58	50	45	56	49	44	53	48	43	41
6	69	56	47	40	67	54	46	40	52	45	39	50	44	39	48	43	38	36
7	64	50	42	35	62	49	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	31	44	36	31	42	36	31	41	35	30	28
9	56	42	34	28	54	42	34	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	87537	87537	87537
5°	85755	85810	85744
10°	85626	85988	85582
15°	86541	86474	86486
20°	87360	87067	87213
25°	88166	87970	88143
30°	86705	85559	86789
35°	83066	81858	83190
40°	76979	76560	77255
45°	70974	72287	70890
50°	65957	67644	66273
55°	61498	62799	61333
60°	57545	58845	57490
65°	54062	56000	53750
70°	50720	54663	50672
75°	49077	54662	49018
80°	49045	55954	48931
85°	50586	57077	50426



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1069.1	3.1
10°-20°	3166.0	9.1
20°-30°	5007.5	14.4
30°-40°	5922.4	17.0
40°-50°	5692.8	16.3
50°-60°	4864.7	14.0
60°-70°	3774.5	10.8
70°-80°	2662.5	7.6
80°-90°	1541.5	4.4
90°-100°	723.8	2.1
100°-110°	333.3	1.0
110°-120°	60.1	0.2
120°-130°	0.9	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°	9242.6	26.5
0°-40°	15164.9	43.6
0°-60°	25722.4	73.9
0°-90°	33700.9	96.8
90°-120°	1117.2	3.2
90°-150°	1118.1	3.2
90°-180°	1118.0	3.2
0°-180°	34819.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	11355	11355	11355	11355	11355	
5°	11197	11200	11204	11189	11196	###
15°	11190	11202	11182	11189	11183	3166
25°	10942	10915	10918	10913	10939	5021
35°	9564	9501	9425	9512	9578	5953
45°	7287	7386	7422	7369	7278	5643
55°	5356	5430	5469	5436	5341	4812
65°	3722	3804	3856	3797	3701	3692
75°	2382	2499	2653	2508	2379	2533
85°	1352	1402	1526	1402	1348	1200
90°	792	868	908	865	789	459
95°	619	652	711	651	622	474
105°	303	307	330	308	301	322
115°	36	46	60	46	36	53
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°	11355.0	11355.0	11355.0	11355.0	11355.0
2.5°	11300.5	11289.1	11293.4	11280.5	11289.1
5°	11197.3	11200.2	11204.5	11188.7	11195.9
7.5°	11152.9	11167.2	11193.0	11160.0	11134.2
10°	11168.6	11193.0	11215.9	11180.1	11162.9
12.5°	11198.7	11205.9	11214.5	11197.3	11195.9
15°	11190.1	11201.6	11181.5	11188.7	11183.0
17.5°	11162.9	11167.2	11152.9	11160.0	11151.4
20°	11111.3	11104.1	11074.0	11096.9	11092.6
22.5°	11049.6	11039.6	11031.0	11043.9	11036.7
25°	10942.1	10914.8	10917.7	10913.4	10939.2
27.5°	10718.4	10673.9	10643.8	10665.3	10739.9
30°	10411.5	10351.3	10273.9	10347.0	10421.6
32.5°	10047.3	10001.4	9931.2	9997.1	10028.7
35°	9564.1	9501.0	9425.0	9512.5	9578.4
37.5°	9037.9	8999.1	8900.2	8994.8	9065.1
40°	8415.5	8424.1	8369.7	8444.2	8445.7
42.5°	7836.2	7895.0	7890.7	7890.7	7836.2
45°	7287.1	7386.0	7421.9	7368.8	7278.5
47.5°	6788.1	6887.0	6948.7	6878.4	6783.8
50°	6281.9	6386.6	6442.5	6373.7	6312.0
52.5°	5834.5	5881.8	5936.3	5876.1	5810.2
55°	5355.6	5430.2	5468.9	5435.9	5341.3
57.5°	4938.3	4991.4	5037.3	5004.3	4909.7
60°	4503.9	4562.7	4605.7	4579.9	4499.6
62.5°	4099.5	4185.5	4217.1	4175.5	4089.5
65°	3722.4	3804.1	3855.8	3797.0	3700.9
67.5°	3346.7	3454.3	3536.0	3465.7	3335.2
70°	2988.2	3130.2	3220.5	3113.0	2985.4
72.5°	2684.3	2811.9	2928.0	2807.6	2672.8
75°	2381.7	2499.3	2652.7	2507.9	2378.8
77.5°	2107.8	2219.7	2387.4	2215.4	2094.9
80°	1852.6	1941.5	2113.6	1935.8	1848.3
82.5°	1603.1	1669.1	1836.8	1666.2	1597.4
85°	1352.2	1402.4	1525.7	1402.4	1347.9
87.5°	1058.2	1139.9	1210.2	1137.1	1042.4
90°	791.5	867.5	907.7	864.6	788.6
92.5°	705.5	744.2	808.7	744.2	705.5
95°	619.4	652.4	711.2	651.0	622.3
97.5°	537.7	563.5	619.4	560.7	540.6
100°	463.1	476.1	527.7	478.9	460.3
102.5°	382.9	391.5	428.7	388.6	382.9
105°	302.6	306.9	329.8	308.3	301.1
107.5°	220.8	225.1	236.6	223.7	219.4
110°	146.3	149.1	163.5	149.1	147.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	84.6	91.8	106.1	91.8	84.6
115°	35.8	45.9	60.2	45.9	35.8
117.5°	11.5	18.6	22.9	18.6	10.0
120°	7.2	8.6	7.2	8.6	7.2
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)