

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: P294464

Luminaire Tested: **BMK-24-WFL-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: P294464  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-103-3)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: BMK-24-WFL-UNV-L735-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH WIDE FROSTED LENS  
Light Source: (528) 70 CRI 3500K LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

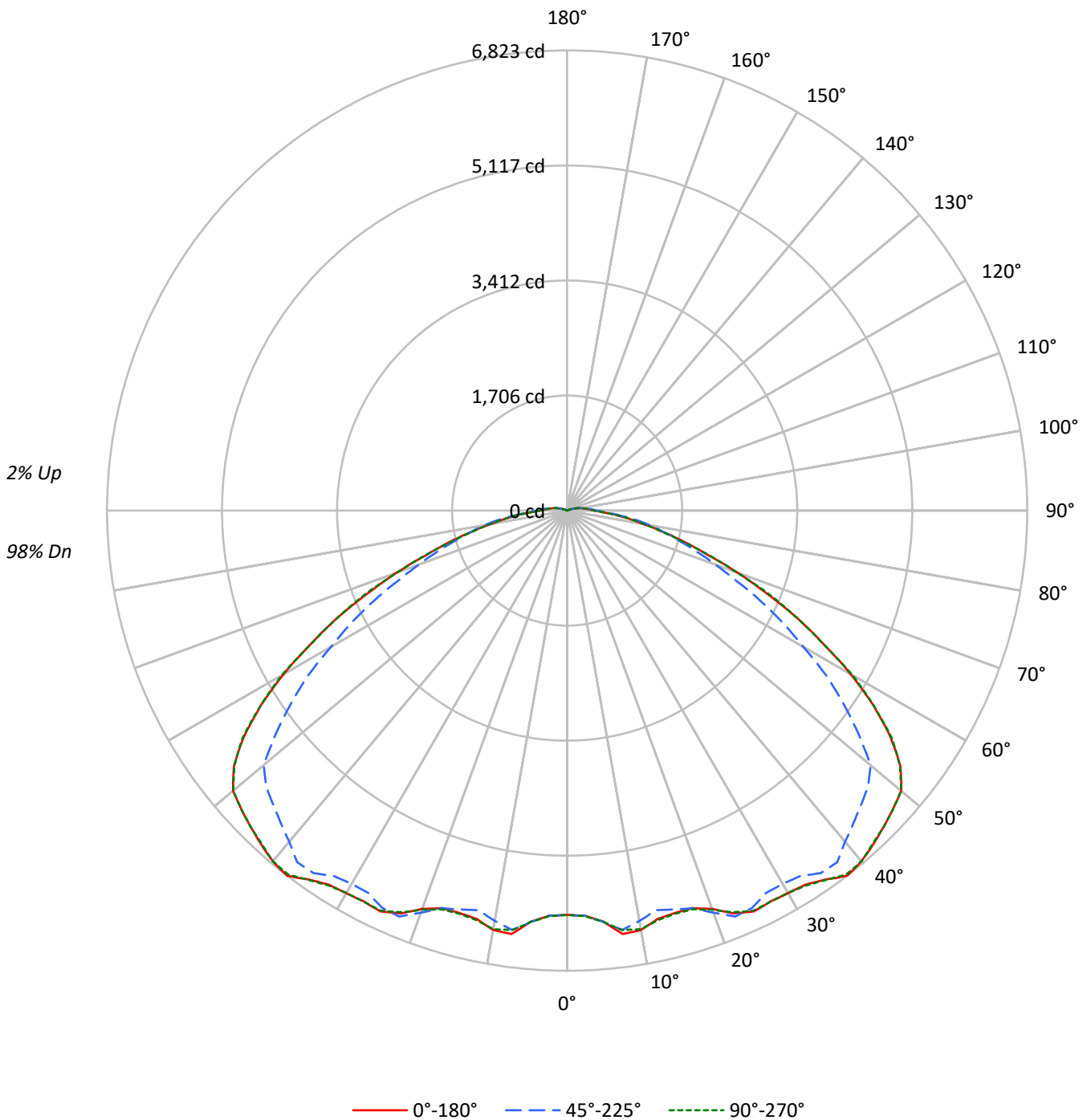
Lumens per Lamp: N/A  
Luminaire Lumens: 25845.0 lumens  
Efficiency: N/A  
Efficacy: 166.2 lumens/watt  
Spacing Criteria (0/90/45): 1.7 / 1.7 / 1.72  
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')  
CIE Type: Direct  
  
Input Watts (W): 155.5  
Input Voltage (V): 120  
Input Current (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	107	102	97	93	104	100	95	92	95	91	88		91	88	85		87	84	82	80
2	97	88	81	75	94	86	79	74	82	76	72		78	74	70		75	71	68	65
3	88	77	68	61	85	75	67	60	71	65	59		68	62	58		65	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	43	56	48	42		53	47	41		51	45	41	38
6	67	53	44	37	65	52	43	37	50	42	36		48	41	36		46	40	35	33
7	62	48	38	32	60	47	38	32	45	37	31		43	36	31		42	35	31	29
8	57	43	34	28	56	42	34	28	41	33	28		39	32	27		38	32	27	25
9	53	39	31	25	52	39	30	25	37	30	25		36	29	24		35	29	24	22
10	50	36	28	22	48	35	28	22	34	27	22		33	27	22		32	26	22	20

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

	0°	45°	90°
0°	46217	46217	46217
5°	46841	46874	46869
10°	48415	47366	48300
15°	47758	47350	47851
20°	49421	49885	49516
25°	52829	52347	52726
30°	54554	53213	54494
35°	58008	56975	58064
40°	62105	58645	62092
45°	64622	60056	64629
50°	67898	61660	67861
55°	67205	57469	67466
60°	62097	51693	62443
65°	54591	45899	54539
70°	45589	39626	45285
75°	37303	35395	36524
80°	30346	32724	30722
85°	26520	28836	26921



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	591.1	2.3
10°-20°	1749.6	6.8
20°-30°	2976.0	11.5
30°-40°	4144.6	16.0
40°-50°	4959.4	19.2
50°-60°	4822.7	18.7
60°-70°	3421.4	13.2
70°-80°	1863.2	7.2
80°-90°	816.6	3.2
90°-100°	339.3	1.3
100°-110°	139.3	0.5
110°-120°	21.4	0.1
120°-130°	0.5	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°	5316.6	20.6
0°-40°	9461.2	36.6
0°-60°	19243.3	74.5
0°-90°	25344.4	98.1
90°-120°	500.0	1.9
90°-150°	500.6	1.9
90°-180°	501.0	1.9
0°-180°	25845.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5995	5995	5995	5995	5995	
5°	6116	6106	6120	6108	6120	594
15°	6175	6097	6123	6086	6187	1761
25°	6556	6387	6497	6393	6544	3008
35°	6679	6684	6560	6663	6685	4205
45°	6635	6419	6166	6427	6636	5133
55°	5853	5414	5005	5424	5875	5176
65°	3759	3432	3160	3436	3755	3710
75°	1810	1696	1718	1701	1772	1940
85°	709	707	771	713	720	670
90°	395	426	435	425	400	226
95°	289	304	326	308	293	219
105°	126	128	125	128	127	137
115°	11	16	18	15	12	19
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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CATALOG NUMBER: BMK-24-WFL-UNV-L735-CD-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5995.1	5995.1	5995.1	5995.1	5995.1
2.5°	6010.1	6006.5	6010.8	6012.2	6018.6
5°	6116.2	6106.2	6120.5	6108.4	6119.8
7.5°	6333.5	6283.6	6271.5	6268.0	6273.7
10°	6315.0	6279.4	6178.2	6277.9	6300.0
12.5°	6200.3	6163.2	6068.5	6159.7	6220.9
15°	6175.3	6097.0	6122.6	6085.6	6187.4
17.5°	6178.9	6109.1	6180.3	6103.4	6198.1
20°	6285.8	6240.9	6344.9	6235.9	6297.9
22.5°	6463.9	6385.5	6513.7	6361.3	6446.8
25°	6556.5	6386.9	6496.6	6393.3	6543.7
27.5°	6532.3	6419.7	6389.1	6419.0	6535.8
30°	6550.8	6487.4	6389.8	6476.7	6543.7
32.5°	6575.0	6537.2	6426.8	6533.0	6589.3
35°	6679.0	6684.0	6560.0	6662.6	6685.4
37.5°	6822.9	6665.5	6573.6	6654.8	6800.1
40°	6789.4	6577.9	6411.2	6577.1	6788.0
42.5°	6715.4	6520.2	6282.9	6523.0	6703.2
45°	6634.9	6419.0	6166.1	6426.8	6635.6
47.5°	6552.9	6380.5	6051.4	6372.7	6552.9
50°	6466.7	6159.0	5872.6	6160.4	6463.2
52.5°	6232.3	5835.5	5446.5	5835.5	6220.9
55°	5852.6	5413.7	5004.8	5424.4	5875.4
57.5°	5389.5	5002.7	4558.1	4997.7	5395.2
60°	4860.2	4461.9	4045.9	4490.4	4887.3
62.5°	4285.3	4001.7	3607.7	3976.8	4281.7
65°	3758.8	3432.5	3160.3	3436.0	3755.2
67.5°	3190.3	2932.4	2708.7	2928.1	3241.6
70°	2685.9	2470.7	2334.6	2470.7	2668.0
72.5°	2186.4	2077.4	2009.1	2073.2	2210.7
75°	1810.3	1695.6	1717.7	1701.3	1772.5
77.5°	1445.5	1388.5	1470.5	1389.2	1436.3
80°	1146.3	1134.2	1236.1	1130.6	1160.5
82.5°	919.0	905.5	1001.7	901.2	929.0
85°	708.9	707.4	770.8	713.1	719.6
87.5°	523.6	542.2	571.4	545.0	524.3
90°	395.4	426.0	435.3	425.3	400.4
92.5°	338.4	359.1	372.6	358.4	344.1
95°	289.2	304.2	325.6	307.8	292.8
97.5°	245.1	259.3	274.3	259.3	247.2
100°	203.8	213.7	228.0	215.2	205.9
102.5°	168.1	170.3	177.4	173.1	167.4
105°	126.1	127.5	125.4	128.2	126.8
107.5°	91.2	89.8	84.1	91.9	90.5
110°	57.0	57.0	55.6	57.7	57.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	29.9	32.1	34.9	32.1	31.3
115°	11.4	15.7	18.5	15.0	12.1
117.5°	5.0	7.1	7.8	7.1	5.0
120°	4.3	5.0	4.3	4.3	4.3
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)