

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: P294476

Luminaire Tested: **BMK-36-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: P294476
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-36-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: 38000.0 lumens
Efficiency: N/A
Efficacy: 156.4 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

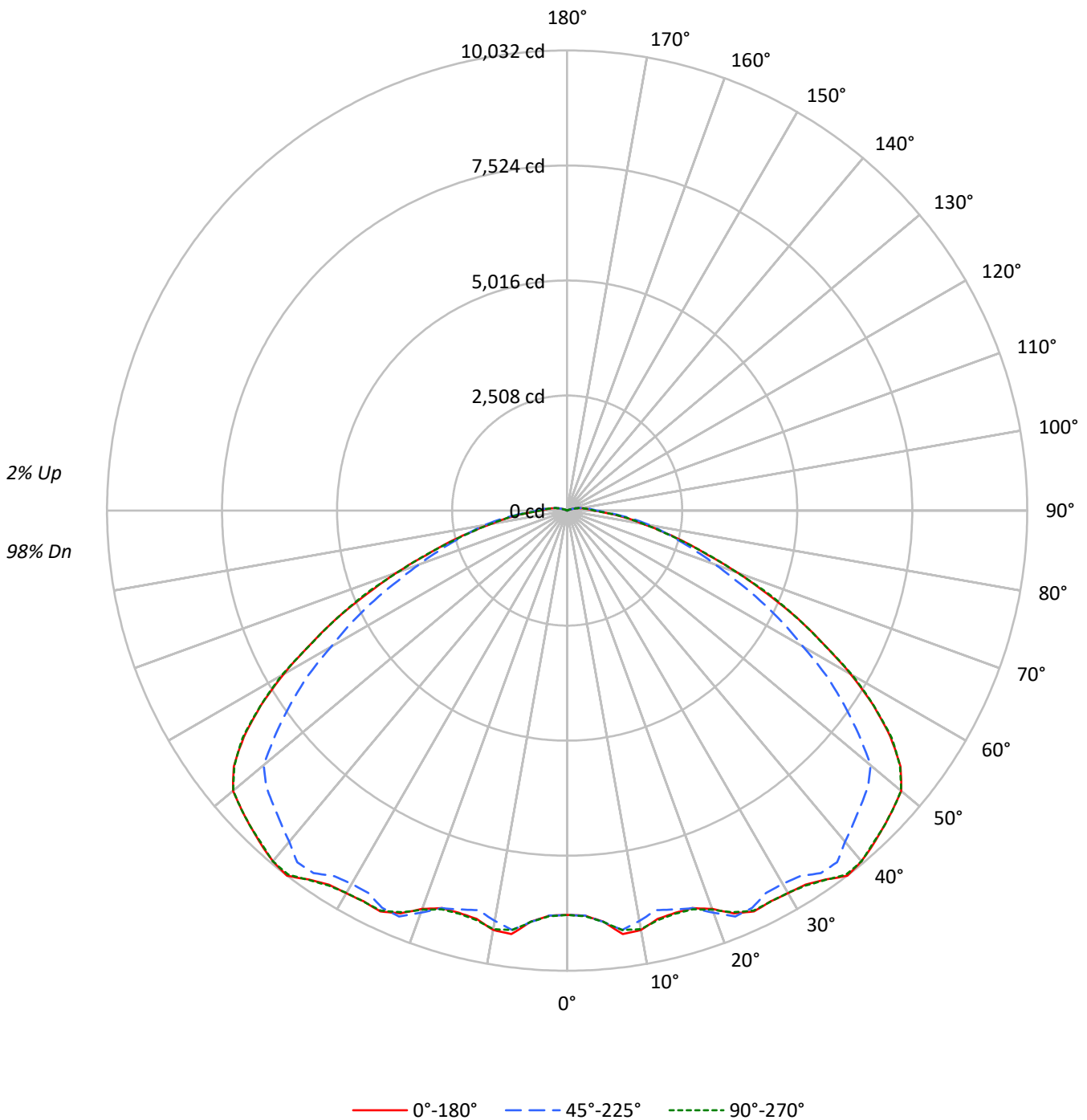
Input Watts (W): 243
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	67953	67953	67953
5°	68871	68919	68911
10°	71184	69642	71015
15°	70219	69619	70356
20°	72663	73346	72803
25°	77675	76966	77523
30°	80210	78239	80123
35°	85290	83771	85372
40°	91314	86225	91295
45°	95013	88300	95024
50°	99830	90658	99776
55°	98811	84498	99196
60°	91302	76004	91810
65°	80264	67486	80189
70°	67028	58263	66583
75°	54847	52041	53701
80°	44618	48113	45174
85°	38989	42401	39580



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	869.1	2.3
10°-20°	2572.4	6.8
20°-30°	4375.6	11.5
30°-40°	6093.9	16.0
40°-50°	7291.8	19.2
50°-60°	7090.8	18.7
60°-70°	5030.4	13.2
70°-80°	2739.4	7.2
80°-90°	1200.7	3.2
90°-100°	498.9	1.3
100°-110°	204.8	0.5
110°-120°	31.5	0.1
120°-130°	0.8	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°	7817.1	20.6
0°-40°	13910.9	36.6
0°-60°	28293.5	74.5
0°-90°	37264.1	98.1
90°-120°	735.2	1.9
90°-150°	735.9	1.9
90°-180°	736.0	1.9
0°-180°	38000.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8815	8815	8815	8815	8815	
5°	8993	8978	8999	8981	8998	874
15°	9080	8964	9002	8948	9097	2589
25°	9640	9391	9552	9400	9621	4423
35°	9820	9828	9645	9796	9830	6182
45°	9755	9438	9066	9449	9756	7548
55°	8605	7960	7359	7976	8639	7610
65°	5526	5047	4647	5052	5521	5455
75°	2662	2493	2526	2501	2606	2853
85°	1042	1040	1133	1048	1058	985
90°	581	626	640	625	589	333
95°	425	447	479	452	430	323
105°	185	188	184	188	186	201
115°	17	23	27	22	18	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°	8814.6	8814.6	8814.6	8814.6	8814.6
2.5°	8836.6	8831.4	8837.6	8839.7	8849.2
5°	8992.7	8978.0	8999.0	8981.2	8997.9
7.5°	9312.2	9238.8	9221.0	9215.8	9224.2
10°	9284.9	9232.6	9083.8	9230.5	9262.9
12.5°	9116.3	9061.8	8922.5	9056.6	9146.7
15°	9079.6	8964.4	9002.1	8947.6	9097.4
17.5°	9084.9	8982.2	9087.0	8973.8	9113.1
20°	9242.0	9176.0	9328.9	9168.7	9259.8
22.5°	9503.9	9388.6	9577.2	9353.0	9478.7
25°	9640.0	9390.7	9552.0	9400.2	9621.2
27.5°	9604.4	9438.9	9393.9	9437.9	9609.6
30°	9631.6	9538.4	9394.9	9522.7	9621.2
32.5°	9667.3	9611.7	9449.4	9605.5	9688.2
35°	9820.2	9827.5	9645.3	9796.1	9829.6
37.5°	10031.8	9800.3	9665.2	9784.6	9998.3
40°	9982.6	9671.4	9426.3	9670.4	9980.5
42.5°	9873.6	9586.6	9237.8	9590.8	9855.8
45°	9755.2	9437.9	9066.0	9449.4	9756.3
47.5°	9634.8	9381.3	8897.4	9369.8	9634.8
50°	9508.0	9055.5	8634.4	9057.6	9502.8
52.5°	9163.4	8580.0	8008.0	8580.0	9146.7
55°	8605.1	7959.9	7358.6	7975.6	8638.6
57.5°	7924.2	7355.5	6701.8	7348.1	7932.6
60°	7146.0	6560.4	5948.7	6602.3	7185.8
62.5°	6300.6	5883.7	5304.5	5847.1	6295.4
65°	5526.5	5046.8	4646.7	5052.0	5521.3
67.5°	4690.6	4311.5	3982.5	4305.2	4766.1
70°	3949.0	3632.7	3432.6	3632.7	3922.8
72.5°	3214.7	3054.5	2953.9	3048.2	3250.4
75°	2661.7	2493.0	2525.5	2501.4	2606.1
77.5°	2125.4	2041.6	2162.0	2042.6	2111.7
80°	1685.4	1667.6	1817.4	1662.4	1706.4
82.5°	1351.3	1331.4	1472.8	1325.1	1365.9
85°	1042.2	1040.2	1133.4	1048.5	1058.0
87.5°	769.9	797.1	840.1	801.3	771.0
90°	581.4	626.4	640.0	625.3	588.7
92.5°	497.6	527.9	547.8	526.9	505.9
95°	425.3	447.3	478.7	452.5	430.5
97.5°	360.3	381.3	403.3	381.3	363.5
100°	299.6	314.2	335.2	316.3	302.7
102.5°	247.2	250.3	260.8	254.5	246.2
105°	185.4	187.5	184.4	188.5	186.5
107.5°	134.1	132.0	123.6	135.1	133.0
110°	83.8	83.8	81.7	84.8	83.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	44.0	47.1	51.3	47.1	46.1
115°	16.8	23.0	27.2	22.0	17.8
117.5°	7.3	10.5	11.5	10.5	7.3
120°	6.3	7.3	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)