

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: P294494

Luminaire Tested: **BMK-18-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: P294494
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-18-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: 20029.0 lumens
Efficiency: N/A
Efficacy: 176.0 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

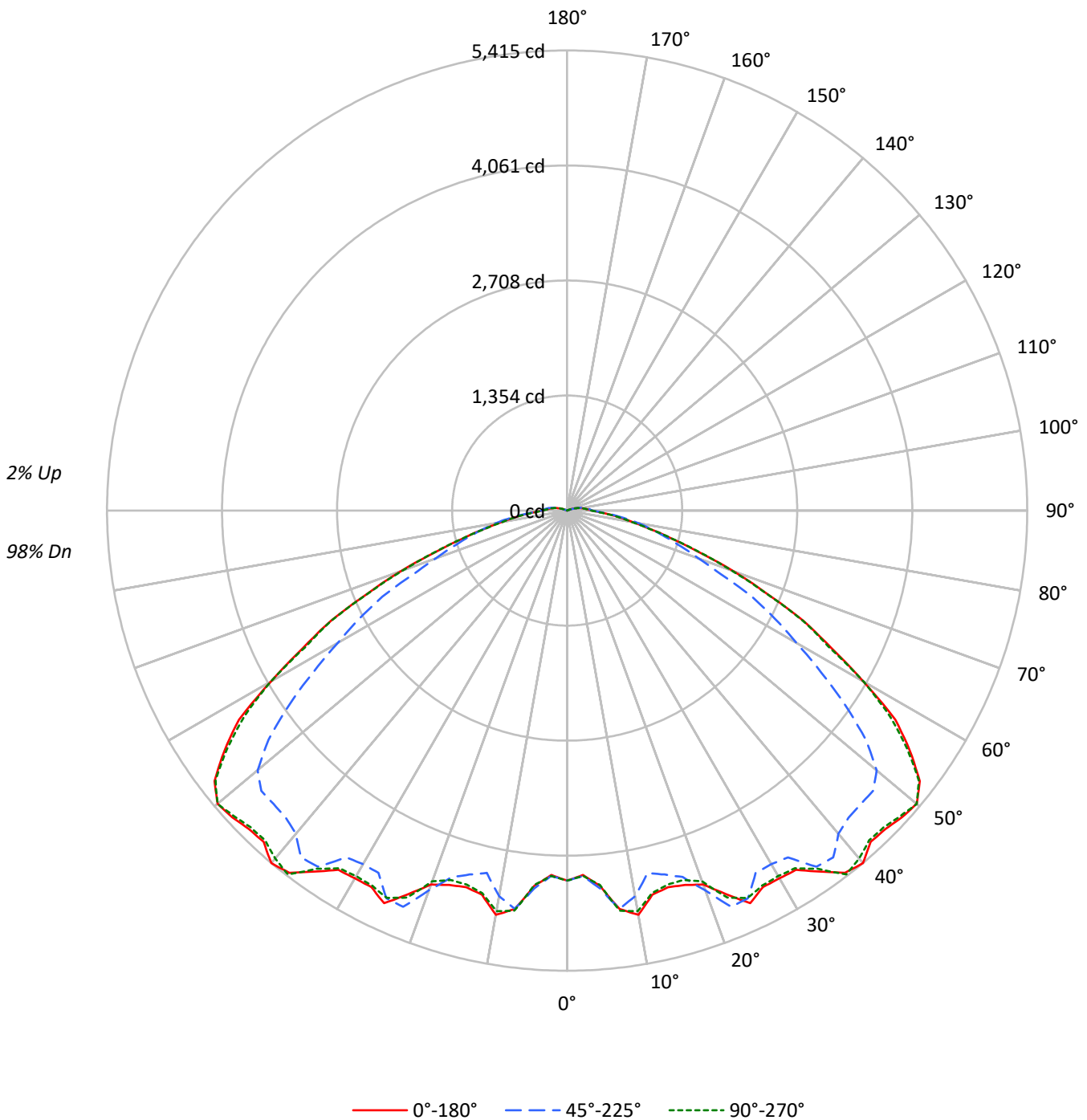
Input Watts (W): 113.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	33574	33574	33574
5°	33943	34189	33858
10°	37029	35319	36697
15°	35480	34289	35244
20°	36813	37394	36498
25°	41076	40558	40520
30°	41611	39995	41357
35°	45027	44442	44679
40°	49536	45427	48891
45°	51604	47573	51322
50°	56371	49920	56388
55°	56529	45938	56087
60°	51441	39841	51483
65°	44544	34852	44427
70°	35232	27935	34877
75°	26244	24624	26411
80°	20808	22550	20342
85°	18241	19263	17762



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	437.4	2.2
10°-20°	1286.7	6.4
20°-30°	2249.9	11.2
30°-40°	3203.9	16.0
40°-50°	3965.5	19.8
50°-60°	3944.7	19.7
60°-70°	2673.7	13.3
70°-80°	1325.8	6.6
80°-90°	553.0	2.8
90°-100°	260.2	1.3
100°-110°	113.2	0.6
110°-120°	14.7	0.1
120°-130°	0.4	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°	3974.0	19.8
0°-40°	7177.9	35.8
0°-60°	15088.0	75.3
0°-90°	19640.6	98.1
90°-120°	388.1	1.9
90°-150°	388.4	1.9
90°-180°	388.0	1.9
0°-180°	20029.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4355	4355	4355	4355	4355	
5°	4432	4414	4464	4434	4421	440
15°	4588	4422	4434	4430	4557	1316
25°	5098	4793	5034	4774	5029	2297
35°	5184	5200	5117	5213	5144	3269
45°	5298	5136	4884	5117	5269	4128
55°	4923	4469	4001	4435	4884	4347
65°	3067	2666	2400	2677	3059	3003
75°	1274	1192	1195	1205	1282	1404
85°	488	475	515	473	475	460
90°	292	311	297	308	287	165
95°	223	239	249	236	221	171
105°	108	103	100	104	108	114
115°	8	10	11	10	8	15
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



TEST NUMBER: P294494

CATALOG NUMBER: BMK-18-WCL-UNV-L735-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4355.1	4355.1	4355.1	4355.1	4355.1
2.5°	4290.9	4308.6	4302.1	4295.7	4302.1
5°	4432.1	4414.4	4464.2	4433.7	4420.9
7.5°	4728.8	4685.5	4725.6	4687.1	4748.1
10°	4829.9	4757.7	4606.9	4740.1	4786.6
12.5°	4629.4	4558.8	4367.9	4571.6	4610.1
15°	4587.7	4422.5	4433.7	4430.5	4557.2
17.5°	4618.2	4420.9	4520.3	4424.1	4557.2
20°	4682.3	4594.1	4756.1	4597.3	4642.2
22.5°	4884.4	4807.4	5046.4	4804.2	4929.3
25°	5097.8	4793.0	5033.6	4773.7	5028.8
27.5°	4991.9	4821.9	4805.8	4802.6	4974.3
30°	4996.7	4874.8	4802.6	4887.6	4966.2
32.5°	5012.8	4972.7	4837.9	4990.3	4990.3
35°	5184.4	5200.4	5117.0	5213.3	5144.3
37.5°	5372.1	5198.8	5144.3	5203.6	5397.7
40°	5415.4	5110.6	4966.2	5104.2	5344.8
42.5°	5287.1	5150.7	4900.5	5134.7	5261.4
45°	5298.3	5136.3	4884.4	5117.0	5269.4
47.5°	5343.2	5234.1	4882.8	5218.1	5319.1
50°	5368.9	5040.0	4754.5	5038.4	5370.5
52.5°	5230.9	4799.4	4428.9	4793.0	5214.9
55°	4922.9	4469.0	4000.6	4435.3	4884.4
57.5°	4579.7	4088.8	3545.0	4061.5	4505.9
60°	4026.2	3612.4	3118.3	3606.0	4029.5
62.5°	3506.5	3219.4	2757.4	3209.8	3469.6
65°	3067.0	2666.0	2399.7	2677.2	3059.0
67.5°	2528.0	2216.8	1955.4	2218.4	2513.6
70°	2075.7	1857.5	1645.8	1843.1	2054.8
72.5°	1628.1	1504.6	1402.0	1499.8	1633.0
75°	1273.6	1191.8	1195.0	1204.7	1281.7
77.5°	996.1	954.4	1018.6	959.2	988.1
80°	786.0	763.5	851.8	763.5	768.4
82.5°	625.6	604.7	675.3	606.3	624.0
85°	487.6	474.8	514.9	473.2	474.8
87.5°	365.7	372.1	377.0	373.8	356.1
90°	291.9	311.2	296.8	308.0	287.1
92.5°	256.7	272.7	272.7	277.5	250.2
95°	223.0	239.0	248.6	235.8	221.4
97.5°	194.1	210.1	221.4	210.1	194.1
100°	166.8	178.1	189.3	174.8	163.6
102.5°	139.6	144.4	147.6	144.4	138.0
105°	107.5	102.7	99.5	104.3	107.5
107.5°	75.4	70.6	59.4	70.6	78.6
110°	44.9	41.7	35.3	41.7	48.1



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CATALOG NUMBER: BMK-18-WCL-UNV-L735-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	22.5	20.9	20.9	22.5	24.1
115°	8.0	9.6	11.2	9.6	8.0
117.5°	3.2	4.8	4.8	4.8	3.2
120°	3.2	3.2	3.2	3.2	3.2
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)