

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: P294453

Luminaire Tested: **BMK-15-WFL-UNV-L740-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: P294453
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-15-WFL-UNV-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE FROSTED LENS
Light Source: (528) 70 CRI 4000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16482.0 lumens
Efficiency: N/A
Efficacy: 175.7 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

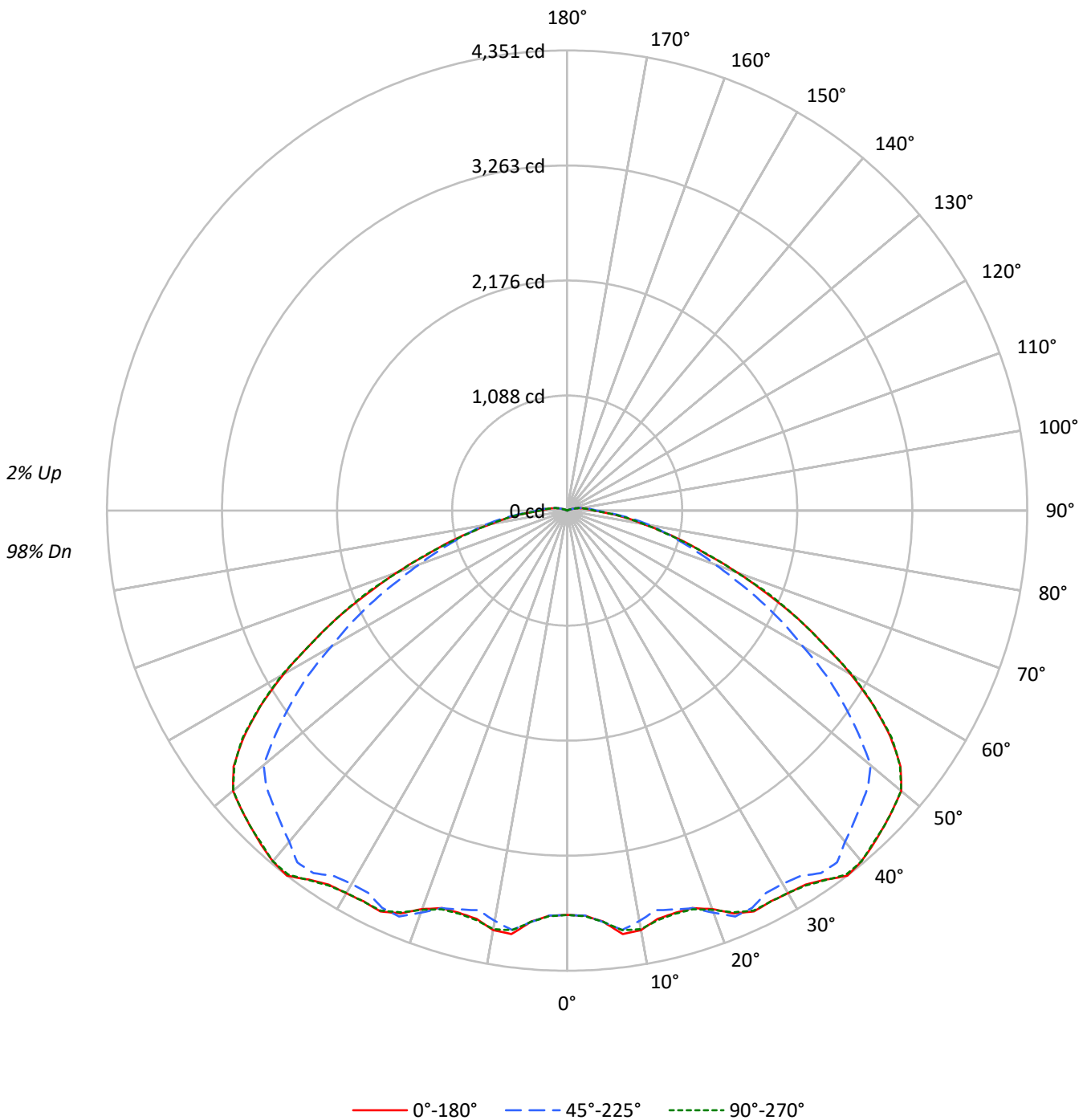
Input Watts (W): 93.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	29473	29473	29473
5°	29872	29893	29889
10°	30875	30207	30802
15°	30457	30196	30516
20°	31517	31813	31577
25°	33690	33383	33625
30°	34790	33935	34753
35°	36994	36334	37029
40°	39606	37400	39598
45°	41211	38299	41216
50°	43300	39322	43276
55°	42859	36650	43025
60°	39601	32966	39821
65°	34814	29271	34781
70°	29072	25272	28880
75°	23790	22572	23293
80°	19352	20869	19593
85°	16913	18391	17168



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	376.9	2.3
10°-20°	1115.7	6.8
20°-30°	1897.9	11.5
30°-40°	2643.1	16.0
40°-50°	3162.7	19.2
50°-60°	3075.5	18.7
60°-70°	2181.9	13.2
70°-80°	1188.2	7.2
80°-90°	520.8	3.2
90°-100°	216.4	1.3
100°-110°	88.8	0.5
110°-120°	13.7	0.1
120°-130°	0.3	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°	3390.5	20.6
0°-40°	6033.7	36.6
0°-60°	12271.9	74.5
0°-90°	16162.8	98.1
90°-120°	318.9	1.9
90°-150°	319.2	1.9
90°-180°	319.0	1.9
0°-180°	16482.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3823	3823	3823	3823	3823	
5°	3900	3894	3903	3896	3903	379
15°	3938	3888	3904	3881	3946	1123
25°	4181	4073	4143	4077	4173	1918
35°	4259	4263	4184	4249	4264	2682
45°	4231	4094	3932	4098	4232	3274
55°	3732	3452	3192	3459	3747	3301
65°	2397	2189	2015	2191	2395	2366
75°	1154	1081	1095	1085	1130	1237
85°	452	451	492	455	459	427
90°	252	272	278	271	255	144
95°	184	194	208	196	187	140
105°	80	81	80	82	81	87
115°	7	10	12	10	8	12
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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3823.2	3823.2	3823.2	3823.2	3823.2
2.5°	3832.8	3830.5	3833.2	3834.1	3838.2
5°	3900.5	3894.1	3903.2	3895.5	3902.7
7.5°	4039.0	4007.2	3999.5	3997.2	4000.9
10°	4027.2	4004.5	3940.0	4003.6	4017.7
12.5°	3954.1	3930.4	3870.0	3928.2	3967.2
15°	3938.2	3888.2	3904.5	3880.9	3945.9
17.5°	3940.4	3895.9	3941.3	3892.3	3952.7
20°	4008.6	3980.0	4046.3	3976.8	4016.3
22.5°	4122.2	4072.2	4154.0	4056.7	4111.3
25°	4181.2	4073.1	4143.1	4077.2	4173.1
27.5°	4165.8	4094.0	4074.5	4093.5	4168.1
30°	4177.6	4137.2	4074.9	4130.3	4173.1
32.5°	4193.0	4169.0	4098.5	4166.2	4202.1
35°	4259.4	4262.6	4183.5	4248.9	4263.5
37.5°	4351.2	4250.7	4192.1	4243.9	4336.6
40°	4329.8	4194.9	4088.6	4194.4	4328.9
42.5°	4282.6	4158.1	4006.8	4159.9	4274.8
45°	4231.2	4093.5	3932.3	4098.5	4231.7
47.5°	4179.0	4069.0	3859.1	4064.0	4179.0
50°	4124.0	3927.7	3745.1	3928.6	4121.7
52.5°	3974.5	3721.4	3473.4	3721.4	3967.2
55°	3732.4	3452.5	3191.7	3459.3	3746.9
57.5°	3437.0	3190.3	2906.8	3187.2	3440.7
60°	3099.5	2845.5	2580.2	2863.7	3116.7
62.5°	2732.8	2552.0	2300.7	2536.1	2730.5
65°	2397.1	2189.0	2015.4	2191.3	2394.8
67.5°	2034.5	1870.0	1727.4	1867.3	2067.2
70°	1712.8	1575.6	1488.9	1575.6	1701.5
72.5°	1394.4	1324.8	1281.2	1322.1	1409.8
75°	1154.5	1081.3	1095.4	1084.9	1130.4
77.5°	921.8	885.5	937.7	886.0	915.9
80°	731.0	723.3	788.3	721.0	740.1
82.5°	586.1	577.5	638.8	574.7	592.5
85°	452.1	451.2	491.6	454.8	458.9
87.5°	333.9	345.7	364.4	347.6	334.4
90°	252.2	271.7	277.6	271.2	255.3
92.5°	215.8	229.0	237.6	228.5	219.4
95°	184.5	194.0	207.6	196.3	186.7
97.5°	156.3	165.4	174.9	165.4	157.7
100°	129.9	136.3	145.4	137.2	131.3
102.5°	107.2	108.6	113.1	110.4	106.8
105°	80.4	81.3	80.0	81.8	80.9
107.5°	58.2	57.2	53.6	58.6	57.7
110°	36.3	36.3	35.4	36.8	36.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	19.1	20.4	22.3	20.4	20.0
115°	7.3	10.0	11.8	9.5	7.7
117.5°	3.2	4.5	5.0	4.5	3.2
120°	2.7	3.2	2.7	2.7	2.7
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)