

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: P294489

Luminaire Tested: **BMK-15-WCL-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: P294489
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-15-WCL-UNV-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE CLEAR 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: 16964.0 lumens
Efficiency: N/A
Efficacy: 180.9 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

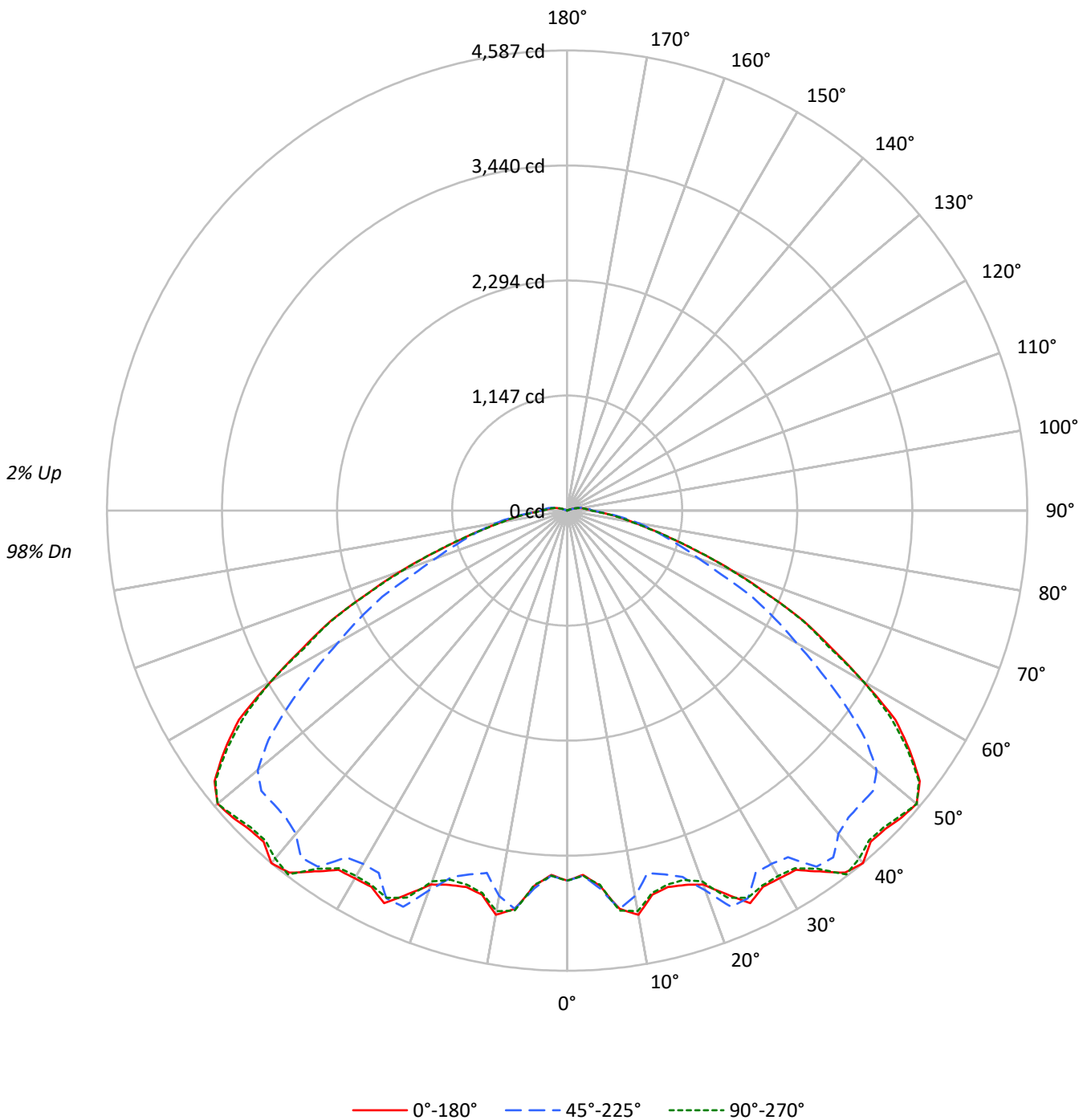
Input Watts (W): 93.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	28436	28436	28436
5°	28749	28957	28676
10°	31363	29915	31081
15°	30050	29042	29850
20°	31180	31672	30913
25°	34790	34352	34320
30°	35244	33875	35029
35°	38136	37641	37842
40°	41956	38476	41409
45°	43707	40293	43468
50°	47745	42281	47758
55°	47879	38909	47505
60°	43570	33744	43604
65°	37728	29519	37629
70°	29839	23659	29540
75°	22228	20857	22368
80°	17623	19098	17229
85°	15451	16315	15043



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	370.5	2.2
10°-20°	1089.8	6.4
20°-30°	1905.6	11.2
30°-40°	2713.6	16.0
40°-50°	3358.7	19.8
50°-60°	3341.0	19.7
60°-70°	2264.5	13.3
70°-80°	1122.9	6.6
80°-90°	468.4	2.8
90°-100°	220.4	1.3
100°-110°	95.8	0.6
110°-120°	12.4	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°	3365.9	19.8
0°-40°	6079.5	35.8
0°-60°	12779.1	75.3
0°-90°	16635.0	98.1
90°-120°	328.7	1.9
90°-150°	329.0	1.9
90°-180°	329.0	1.9
0°-180°	16964.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3689	3689	3689	3689	3689	
5°	3754	3739	3781	3755	3744	373
15°	3886	3746	3755	3752	3860	1115
25°	4318	4060	4263	4043	4259	1945
35°	4391	4405	4334	4416	4357	2769
45°	4488	4350	4137	4334	4463	3496
55°	4170	3785	3388	3757	4137	3682
65°	2598	2258	2032	2268	2591	2544
75°	1079	1009	1012	1020	1086	1189
85°	413	402	436	401	402	389
90°	247	264	251	261	243	140
95°	189	202	211	200	188	145
105°	91	87	84	88	91	96
115°	7	8	10	8	7	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°	3688.6	3688.6	3688.6	3688.6	3688.6
2.5°	3634.3	3649.2	3643.8	3638.4	3643.8
5°	3753.8	3738.9	3781.0	3755.2	3744.3
7.5°	4005.2	3968.5	4002.5	3969.9	4021.5
10°	4090.8	4029.6	3901.9	4014.7	4054.1
12.5°	3921.0	3861.2	3699.5	3872.0	3904.7
15°	3885.6	3745.7	3755.2	3752.5	3859.8
17.5°	3911.4	3744.3	3828.6	3747.1	3859.8
20°	3965.8	3891.1	4028.3	3893.8	3931.8
22.5°	4137.0	4071.8	4274.2	4069.0	4175.0
25°	4317.7	4059.5	4263.3	4043.2	4259.3
27.5°	4228.0	4084.0	4070.4	4067.7	4213.1
30°	4232.1	4128.8	4067.7	4139.7	4206.3
32.5°	4245.7	4211.7	4097.6	4226.6	4226.6
35°	4391.0	4404.6	4334.0	4415.5	4357.1
37.5°	4550.0	4403.3	4357.1	4407.3	4571.7
40°	4586.7	4328.5	4206.3	4323.1	4526.9
42.5°	4478.0	4362.5	4150.6	4348.9	4456.2
45°	4487.5	4350.3	4137.0	4334.0	4463.0
47.5°	4525.5	4433.2	4135.6	4419.6	4505.2
50°	4547.3	4268.8	4026.9	4267.4	4548.6
52.5°	4430.4	4065.0	3751.1	4059.5	4416.8
55°	4169.6	3785.1	3388.4	3756.6	4137.0
57.5°	3878.8	3463.1	3002.5	3440.0	3816.3
60°	3410.1	3059.6	2641.1	3054.2	3412.8
62.5°	2969.9	2726.7	2335.5	2718.6	2938.7
65°	2597.7	2258.0	2032.5	2267.5	2590.9
67.5°	2141.2	1877.6	1656.1	1879.0	2128.9
70°	1758.0	1573.3	1393.9	1561.0	1740.4
72.5°	1379.0	1274.4	1187.4	1270.3	1383.1
75°	1078.7	1009.4	1012.2	1020.3	1085.5
77.5°	843.7	808.4	862.7	812.5	836.9
80°	665.7	646.7	721.4	646.7	650.8
82.5°	529.9	512.2	572.0	513.6	528.5
85°	413.0	402.1	436.1	400.8	402.1
87.5°	309.8	315.2	319.3	316.6	301.6
90°	247.3	263.6	251.3	260.9	243.2
92.5°	217.4	231.0	231.0	235.0	211.9
95°	188.8	202.4	210.6	199.7	187.5
97.5°	164.4	178.0	187.5	178.0	164.4
100°	141.3	150.8	160.3	148.1	138.6
102.5°	118.2	122.3	125.0	122.3	116.8
105°	91.0	87.0	84.2	88.3	91.0
107.5°	63.9	59.8	50.3	59.8	66.6
110°	38.0	35.3	29.9	35.3	40.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	19.0	17.7	17.7	19.0	20.4
115°	6.8	8.2	9.5	8.2	6.8
117.5°	2.7	4.1	4.1	4.1	2.7
120°	2.7	2.7	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)