

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: P294495

Luminaire Tested: **BMK-18-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: P294495
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-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: 20293.1 lumens
Efficiency: N/A
Efficacy: 178.3 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

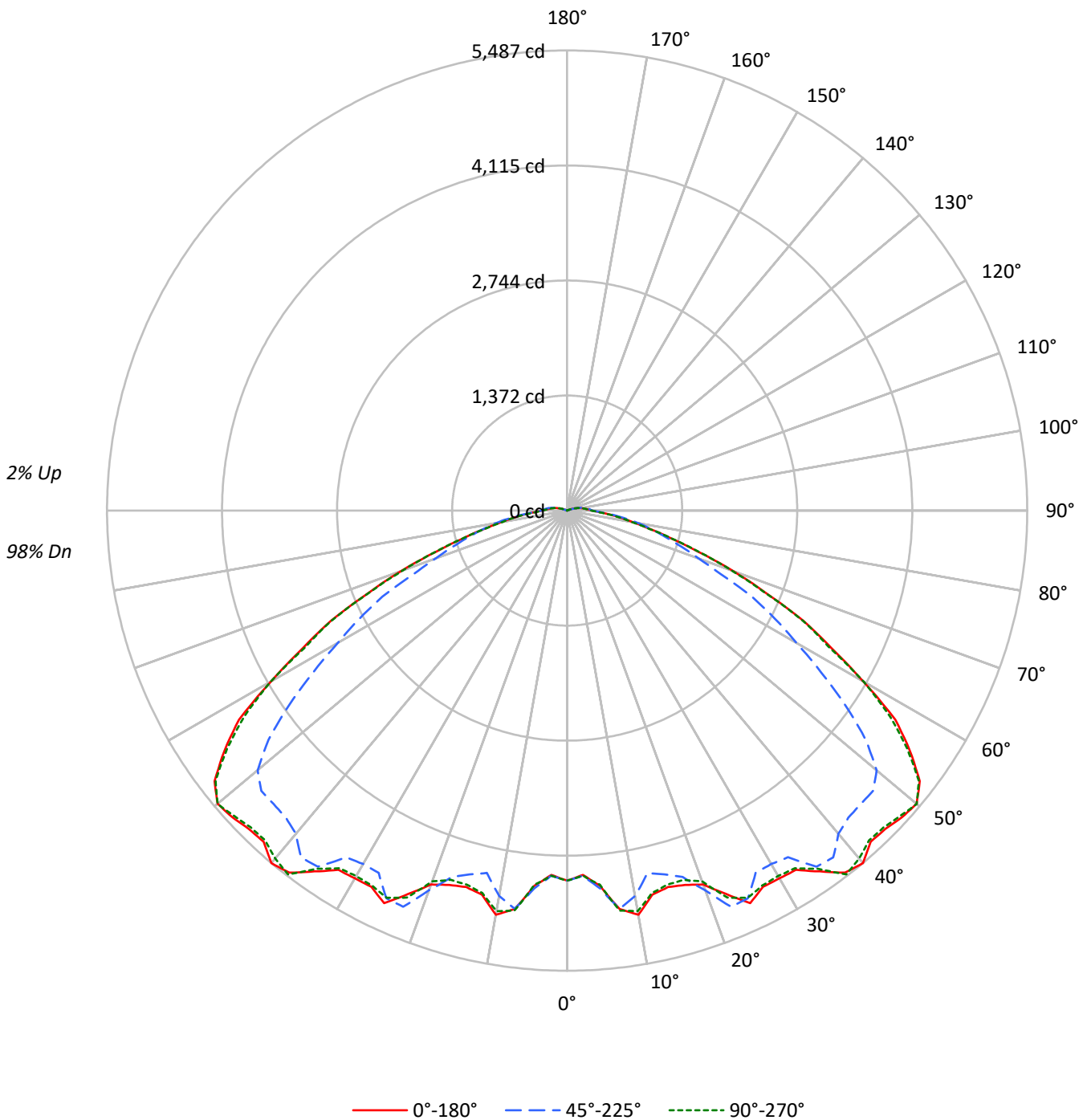
Input Watts (W): 113.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	34016	34016	34016
5°	34391	34640	34303
10°	37518	35785	37181
15°	35947	34740	35709
20°	37299	37887	36979
25°	41617	41093	41054
30°	42160	40522	41903
35°	45620	45028	45268
40°	50189	46027	49535
45°	52284	48200	51999
50°	57114	50579	57131
55°	57274	46544	56826
60°	52120	40366	52162
65°	45130	35311	45013
70°	35695	28303	35337
75°	26590	24950	26759
80°	21083	22847	20610
85°	18485	19517	17998



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	443.2	2.2
10°-20°	1303.7	6.4
20°-30°	2279.5	11.2
30°-40°	3246.1	16.0
40°-50°	4017.8	19.8
50°-60°	3996.6	19.7
60°-70°	2708.9	13.3
70°-80°	1343.3	6.6
80°-90°	560.3	2.8
90°-100°	263.7	1.3
100°-110°	114.6	0.6
110°-120°	14.9	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°	4026.4	19.8
0°-40°	7272.5	35.8
0°-60°	15286.9	75.3
0°-90°	19899.5	98.1
90°-120°	393.2	1.9
90°-150°	393.6	1.9
90°-180°	394.0	1.9
0°-180°	20293.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4412	4412	4412	4412	4412	
5°	4490	4473	4523	4492	4479	446
15°	4648	4481	4492	4489	4617	1333
25°	5165	4856	5100	4837	5095	2327
35°	5253	5269	5184	5282	5212	3312
45°	5368	5204	4949	5184	5339	4182
55°	4988	4528	4053	4494	4949	4404
65°	3107	2701	2431	2712	3099	3043
75°	1290	1208	1211	1220	1299	1423
85°	494	481	522	479	481	466
90°	296	315	301	312	291	167
95°	226	242	252	239	224	174
105°	109	104	101	106	109	115
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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4412.5	4412.5	4412.5	4412.5	4412.5
2.5°	4347.5	4365.4	4358.9	4352.4	4358.9
5°	4490.5	4472.6	4523.0	4492.1	4479.1
7.5°	4791.2	4747.3	4787.9	4748.9	4810.7
10°	4893.6	4820.4	4667.6	4802.5	4849.7
12.5°	4690.4	4618.9	4425.5	4631.9	4670.9
15°	4648.1	4480.7	4492.1	4488.9	4617.3
17.5°	4679.0	4479.1	4579.9	4482.4	4617.3
20°	4744.0	4654.6	4818.8	4657.9	4703.4
22.5°	4948.8	4870.8	5113.0	4867.6	4994.3
25°	5165.0	4856.2	5100.0	4836.7	5095.1
27.5°	5057.7	4885.4	4869.2	4865.9	5039.8
30°	5062.6	4939.1	4865.9	4952.1	5031.7
32.5°	5078.8	5038.2	4901.7	5056.1	5056.1
35°	5252.7	5269.0	5184.5	5282.0	5212.1
37.5°	5442.9	5267.4	5212.1	5272.2	5468.9
40°	5486.8	5178.0	5031.7	5171.5	5415.3
42.5°	5356.7	5218.6	4965.1	5202.3	5330.7
45°	5368.1	5204.0	4948.8	5184.5	5338.9
47.5°	5413.6	5303.1	4947.2	5286.9	5389.2
50°	5439.6	5106.5	4817.2	5104.8	5441.3
52.5°	5299.9	4862.7	4487.2	4856.2	5283.6
55°	4987.8	4527.9	4053.3	4493.7	4948.8
57.5°	4640.0	4142.7	3591.7	4115.1	4565.3
60°	4079.3	3660.0	3159.4	3653.5	4082.6
62.5°	3552.7	3261.8	2793.8	3252.1	3515.4
65°	3107.4	2701.1	2431.3	2712.5	3099.3
67.5°	2561.4	2246.1	1981.2	2247.7	2546.7
70°	2103.0	1882.0	1667.5	1867.4	2081.9
72.5°	1649.6	1524.5	1420.4	1519.6	1654.5
75°	1290.4	1207.5	1210.8	1220.5	1298.6
77.5°	1009.3	967.0	1032.0	971.9	1001.1
80°	796.4	773.6	863.0	773.6	778.5
82.5°	633.8	612.7	684.2	614.3	632.2
85°	494.1	481.1	521.7	479.4	481.1
87.5°	370.6	377.1	381.9	378.7	360.8
90°	295.8	315.3	300.7	312.0	290.9
92.5°	260.0	276.3	276.3	281.2	253.5
95°	225.9	242.2	251.9	238.9	224.3
97.5°	196.7	212.9	224.3	212.9	196.7
100°	169.0	180.4	191.8	177.1	165.8
102.5°	141.4	146.3	149.5	146.3	139.8
105°	108.9	104.0	100.8	105.6	108.9
107.5°	76.4	71.5	60.1	71.5	79.6
110°	45.5	42.3	35.8	42.3	48.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	22.8	21.1	21.1	22.8	24.4
115°	8.1	9.8	11.4	9.8	8.1
117.5°	3.3	4.9	4.9	4.9	3.3
120°	3.3	3.3	3.3	3.3	3.3
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)