

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: P294465

Luminaire Tested: **BMK-24-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: P294465
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-24-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: 26186.0 lumens
Efficiency: N/A
Efficacy: 168.4 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

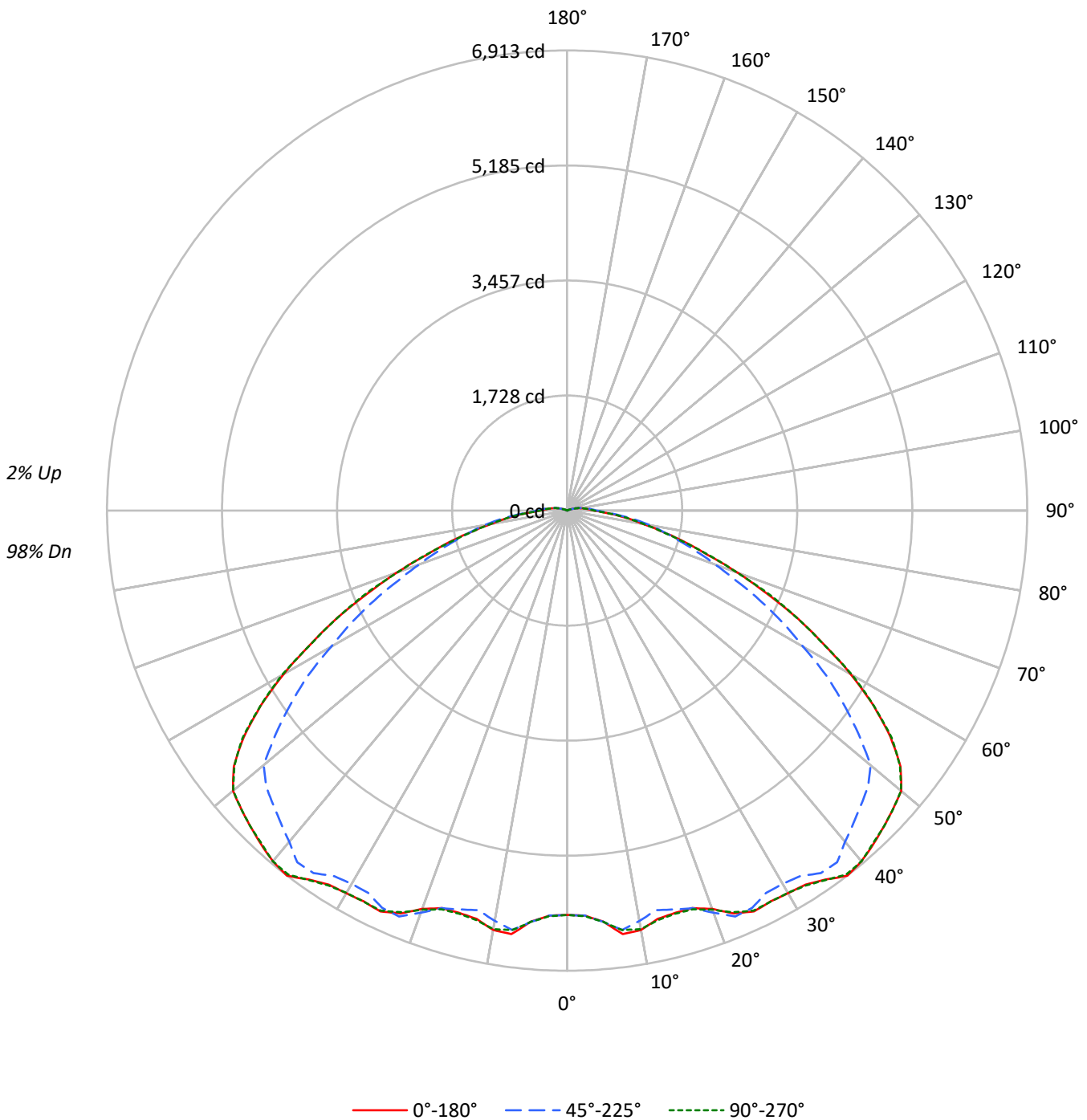
Input Watts (W): 155.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	46827	46827	46827
5°	47459	47492	47487
10°	49054	47991	48937
15°	48388	47975	48483
20°	50072	50543	50169
25°	53526	53038	53422
30°	55273	53915	55213
35°	58773	57727	58830
40°	62924	59418	62912
45°	65474	60848	65481
50°	68793	62473	68756
55°	68091	58227	68356
60°	62916	52375	63266
65°	55311	46504	55259
70°	46190	40149	45882
75°	37796	35861	37006
80°	30746	33155	31130
85°	26868	29218	27272



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	598.9	2.3
10°-20°	1772.7	6.8
20°-30°	3015.3	11.5
30°-40°	4199.3	16.0
40°-50°	5024.8	19.2
50°-60°	4886.3	18.7
60°-70°	3466.5	13.2
70°-80°	1887.8	7.2
80°-90°	827.4	3.2
90°-100°	343.8	1.3
100°-110°	141.1	0.5
110°-120°	21.7	0.1
120°-130°	0.5	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°	5386.8	20.6
0°-40°	9586.1	36.6
0°-60°	19497.2	74.5
0°-90°	25678.8	98.1
90°-120°	506.6	1.9
90°-150°	507.1	1.9
90°-180°	507.0	1.9
0°-180°	26186.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6074	6074	6074	6074	6074	
5°	6197	6187	6201	6189	6200	602
15°	6257	6177	6203	6166	6269	1784
25°	6643	6471	6582	6478	6630	3048
35°	6767	6772	6647	6750	6774	4260
45°	6722	6504	6247	6512	6723	5201
55°	5930	5485	5071	5496	5953	5244
65°	3808	3478	3202	3481	3805	3759
75°	1834	1718	1740	1724	1796	1966
85°	718	717	781	723	729	679
90°	401	432	441	431	406	229
95°	293	308	330	312	297	222
105°	128	129	127	130	128	139
115°	12	16	19	15	12	20
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°	6074.2	6074.2	6074.2	6074.2	6074.2
2.5°	6089.3	6085.7	6090.1	6091.5	6098.0
5°	6196.9	6186.8	6201.2	6189.0	6200.5
7.5°	6417.1	6366.5	6354.3	6350.7	6356.4
10°	6398.3	6362.2	6259.7	6360.8	6383.1
12.5°	6282.1	6244.5	6148.5	6240.9	6303.0
15°	6256.8	6177.4	6203.4	6165.9	6269.1
17.5°	6260.4	6189.7	6261.9	6183.9	6279.9
20°	6368.7	6323.2	6428.6	6318.2	6381.0
22.5°	6549.2	6469.8	6599.7	6445.2	6531.8
25°	6643.0	6471.2	6582.4	6477.7	6630.0
27.5°	6618.4	6504.4	6473.4	6503.7	6622.1
30°	6637.2	6573.0	6474.1	6562.1	6630.0
32.5°	6661.8	6623.5	6511.6	6619.2	6676.2
35°	6767.1	6772.2	6646.6	6750.5	6773.6
37.5°	6913.0	6753.4	6660.3	6742.6	6889.9
40°	6879.0	6664.6	6495.7	6663.9	6877.6
42.5°	6804.0	6606.2	6365.8	6609.1	6791.7
45°	6722.4	6503.7	6247.4	6511.6	6723.1
47.5°	6639.4	6464.7	6131.2	6456.8	6639.4
50°	6552.0	6240.2	5950.0	6241.7	6548.4
52.5°	6314.6	5912.5	5518.4	5912.5	6303.0
55°	5929.8	5485.2	5070.8	5496.0	5952.9
57.5°	5460.6	5068.7	4618.3	5063.6	5466.4
60°	4924.3	4520.8	4099.3	4549.7	4951.7
62.5°	4341.8	4054.5	3655.3	4029.2	4338.2
65°	3808.4	3477.8	3202.0	3481.4	3804.8
67.5°	3232.4	2971.0	2744.4	2966.7	3284.3
70°	2721.3	2503.3	2365.4	2503.3	2703.2
72.5°	2215.3	2104.9	2035.6	2100.5	2239.8
75°	1834.2	1718.0	1740.3	1723.7	1795.9
77.5°	1464.6	1406.8	1489.9	1407.6	1455.2
80°	1161.4	1149.2	1252.4	1145.5	1175.9
82.5°	931.2	917.4	1014.9	913.1	941.3
85°	718.2	716.8	781.0	722.6	729.0
87.5°	530.5	549.3	578.9	552.2	531.3
90°	400.6	431.7	441.0	430.9	405.7
92.5°	342.9	363.8	377.5	363.1	348.6
95°	293.1	308.2	329.9	311.8	296.7
97.5°	248.3	262.7	277.9	262.7	250.5
100°	206.4	216.5	231.0	218.0	208.6
102.5°	170.4	172.5	179.7	175.4	169.6
105°	127.8	129.2	127.0	129.9	128.5
107.5°	92.4	91.0	85.2	93.1	91.7
110°	57.7	57.7	56.3	58.5	57.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	30.3	32.5	35.4	32.5	31.8
115°	11.5	15.9	18.8	15.2	12.3
117.5°	5.1	7.2	7.9	7.2	5.1
120°	4.3	5.1	4.3	4.3	4.3
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)