

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: P381624

Luminaire Tested: **BMK-50-WFL-UNV-L835-CD-U**

Issue Date: 2/4/2020

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: P381624
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-1)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-50-WFL-UNV-L835-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH WIDE FROSTED LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 50304.1 lumens
Efficiency: N/A
Efficacy: 151.3 lumens/watt
Spacing Criteria (0/90/45): 1.69 / 1.69 / 1.76
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

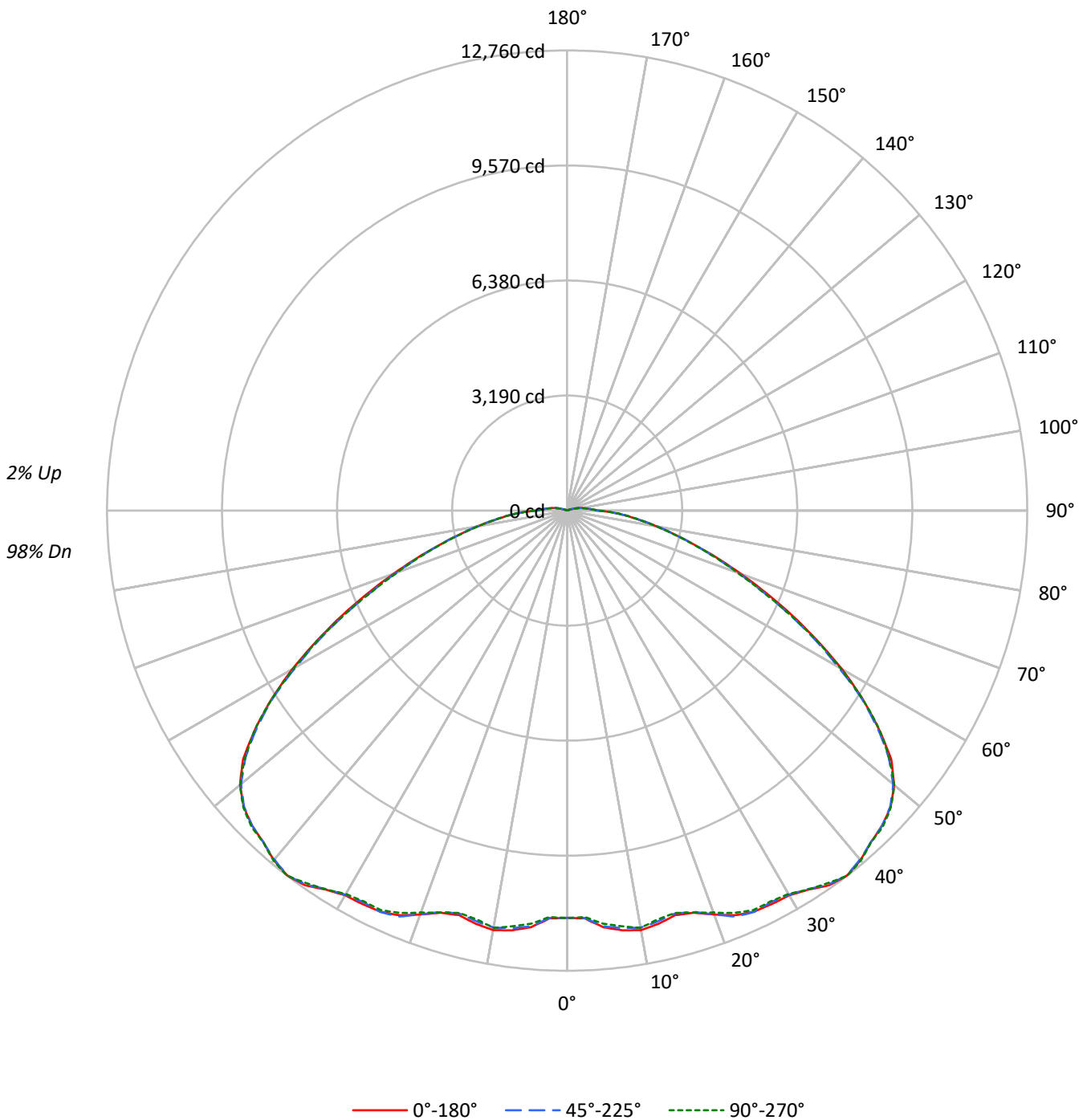
Input Watts (W): 332.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	91	95	91	88	90	87	85	86	84	82	79
2	96	88	80	74	94	85	79	73	81	76	71	78	73	69	74	70	67	65
3	87	76	67	60	85	74	66	59	71	64	58	68	62	57	65	60	56	53
4	79	66	57	50	77	65	56	49	62	55	48	60	53	48	57	51	47	44
5	73	59	49	42	70	58	49	42	55	47	41	53	46	40	51	45	40	38
6	67	52	43	36	64	51	42	36	49	41	35	47	40	35	46	39	34	32
7	61	47	38	31	59	46	37	31	44	37	31	43	36	30	41	35	30	28
8	57	43	34	28	55	42	33	27	40	33	27	39	32	27	38	31	26	24
9	53	39	30	24	51	38	30	24	37	29	24	36	29	24	34	28	24	22
10	49	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°	87097	87097	87097
5°	88877	88675	88132
10°	90602	90073	90112
15°	89842	89474	89372
20°	93733	93725	93295
25°	98894	98975	98526
30°	102632	102454	102252
35°	110177	109949	109552
40°	115790	115595	115929
45°	120367	120407	120703
50°	124343	123960	124407
55°	121200	120677	121398
60°	112565	111101	111917
65°	100071	98467	98893
70°	86806	85619	85154
75°	75007	74881	74632
80°	66647	67102	66432
85°	61850	62000	62419



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1107.9	2.2
10°-20°	3313.3	6.6
20°-30°	5645.6	11.2
30°-40°	7911.7	15.7
40°-50°	9524.4	18.9
50°-60°	9327.4	18.5
60°-70°	6761.3	13.4
70°-80°	3894.8	7.7
80°-90°	1824.7	3.6
90°-100°	654.5	1.3
100°-110°	248.8	0.5
110°-120°	35.6	0.1
120°-130°	13.4	0.0
130°-140°	14.8	0.0
140°-150°	12.8	0.0
150°-160°	7.4	0.0
160°-170°	4.3	0.0
170°-180°	1.4	0.0
0°-30°	10066.8	20.0
0°-40°	17978.5	35.7
0°-60°	36830.3	73.2
0°-90°	49311.1	98.0
90°-120°	938.8	1.9
90°-150°	979.9	1.9
90°-180°	993.0	2.0
0°-180°	50304.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	11292	11292	11292	11292	11292	
5°	11599	11544	11573	11563	11502	###
15°	11611	11552	11564	11579	11550	3324
25°	12268	12244	12278	12248	12222	5655
35°	12680	12660	12653	12672	12608	7917
45°	12352	12397	12357	12350	12387	9524
55°	10550	10527	10504	10467	10567	9374
65°	6887	6822	6777	6765	6806	6835
75°	3638	3632	3632	3609	3620	3914
85°	1653	1677	1657	1656	1668	1524
90°	879	871	812	859	880	512
95°	585	588	586	580	582	442
105°	222	225	229	227	224	247
115°	25	24	24	25	24	36
125°	15	15	15	15	15	13
135°	19	19	19	19	19	15
145°	21	20	21	21	20	13
155°	15	15	15	15	15	7
165°	15	15	15	15	15	4
175°	15	15	15	15	15	1
180°	15	15	15	15	15	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	11292.3	11292.3	11292.3	11292.3	11292.3
2.5°	11320.6	11288.2	11310.5	11323.7	11281.1
5°	11599.1	11544.4	11572.8	11562.7	11501.9
7.5°	11738.9	11669.0	11674.0	11679.1	11625.4
10°	11811.8	11752.0	11742.9	11774.3	11748.0
12.5°	11731.8	11653.8	11663.9	11684.2	11607.2
15°	11611.3	11551.5	11563.7	11578.9	11550.5
17.5°	11694.3	11651.8	11663.9	11683.2	11683.2
20°	11916.1	11878.6	11915.1	11897.8	11860.4
22.5°	12147.0	12122.7	12184.4	12129.8	12078.1
25°	12267.5	12244.2	12277.6	12248.2	12221.9
27.5°	12297.9	12269.5	12240.1	12255.3	12218.9
30°	12318.1	12322.2	12296.8	12313.0	12272.5
32.5°	12460.9	12482.2	12442.7	12495.3	12454.8
35°	12679.6	12660.4	12653.3	12671.5	12607.7
37.5°	12753.6	12724.2	12750.5	12751.5	12759.6
40°	12652.3	12618.9	12631.0	12638.1	12667.5
42.5°	12470.0	12488.2	12470.0	12460.9	12474.1
45°	12352.5	12397.1	12356.6	12350.5	12387.0
47.5°	12165.2	12193.5	12154.1	12151.0	12175.3
50°	11837.1	11797.6	11800.6	11812.8	11843.2
52.5°	11327.7	11263.9	11242.7	11227.5	11255.8
55°	10550.0	10526.7	10504.4	10466.9	10567.2
57.5°	9711.5	9637.6	9675.0	9643.6	9701.4
60°	8806.2	8730.2	8691.7	8700.9	8755.5
62.5°	7824.9	7804.6	7750.0	7756.0	7799.6
65°	6887.2	6822.4	6776.8	6764.6	6806.1
67.5°	5966.6	5883.6	5865.4	5830.9	5838.0
70°	5112.0	5064.4	5042.1	5025.9	5014.7
72.5°	4343.3	4317.0	4299.8	4289.7	4290.7
75°	3638.5	3632.4	3632.4	3609.2	3620.3
77.5°	3041.0	3068.4	3046.1	3027.9	3022.8
80°	2516.5	2547.9	2533.7	2516.5	2508.4
82.5°	2049.6	2084.1	2066.9	2059.8	2052.7
85°	1652.7	1677.0	1656.7	1655.7	1667.9
87.5°	1278.0	1287.1	1258.7	1275.0	1304.3
90°	879.0	870.9	812.2	858.7	880.0
92.5°	696.7	702.8	691.7	689.6	694.7
95°	585.3	588.4	586.3	580.3	582.3
97.5°	488.1	494.2	491.1	488.1	488.1
100°	397.0	400.0	402.0	398.0	397.0
102.5°	310.9	312.9	311.9	312.9	311.9
105°	221.8	224.8	228.9	226.8	223.8
107.5°	150.9	151.9	150.9	152.9	153.9
110°	94.2	92.2	90.1	93.2	95.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	50.6	49.6	51.6	50.6	48.6
115°	25.3	24.3	24.3	25.3	24.3
117.5°	14.2	14.2	13.2	14.2	14.2
120°	12.2	12.2	12.2	12.2	13.2
122.5°	13.2	14.2	13.2	14.2	14.2
125°	15.2	15.2	15.2	15.2	15.2
127.5°	16.2	16.2	16.2	16.2	16.2
130°	17.2	17.2	17.2	17.2	17.2
132.5°	18.2	18.2	18.2	18.2	18.2
135°	19.2	19.2	19.2	19.2	19.2
137.5°	20.3	20.3	20.3	20.3	20.3
140°	21.3	21.3	21.3	21.3	20.3
142.5°	21.3	21.3	21.3	21.3	20.3
145°	21.3	20.3	21.3	21.3	20.3
147.5°	20.3	19.2	19.2	20.3	19.2
150°	18.2	18.2	18.2	18.2	18.2
152.5°	16.2	16.2	16.2	16.2	16.2
155°	15.2	15.2	15.2	15.2	15.2
157.5°	15.2	15.2	15.2	15.2	15.2
160°	15.2	15.2	15.2	15.2	15.2
162.5°	15.2	15.2	15.2	15.2	15.2
165°	15.2	15.2	15.2	15.2	15.2
167.5°	15.2	15.2	15.2	15.2	15.2
170°	15.2	15.2	15.2	15.2	15.2
172.5°	15.2	15.2	15.2	15.2	15.2
175°	15.2	15.2	15.2	15.2	15.2
177.5°	14.2	15.2	15.2	15.2	15.2
180°	15.2	15.2	15.2	15.2	15.2

(END OF REPORT)