

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: P381623

Luminaire Tested: **BMK-50-WFL-UNV-L750-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: P381623
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-L750-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: 55098.5 lumens
Efficiency: N/A
Efficacy: 165.7 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

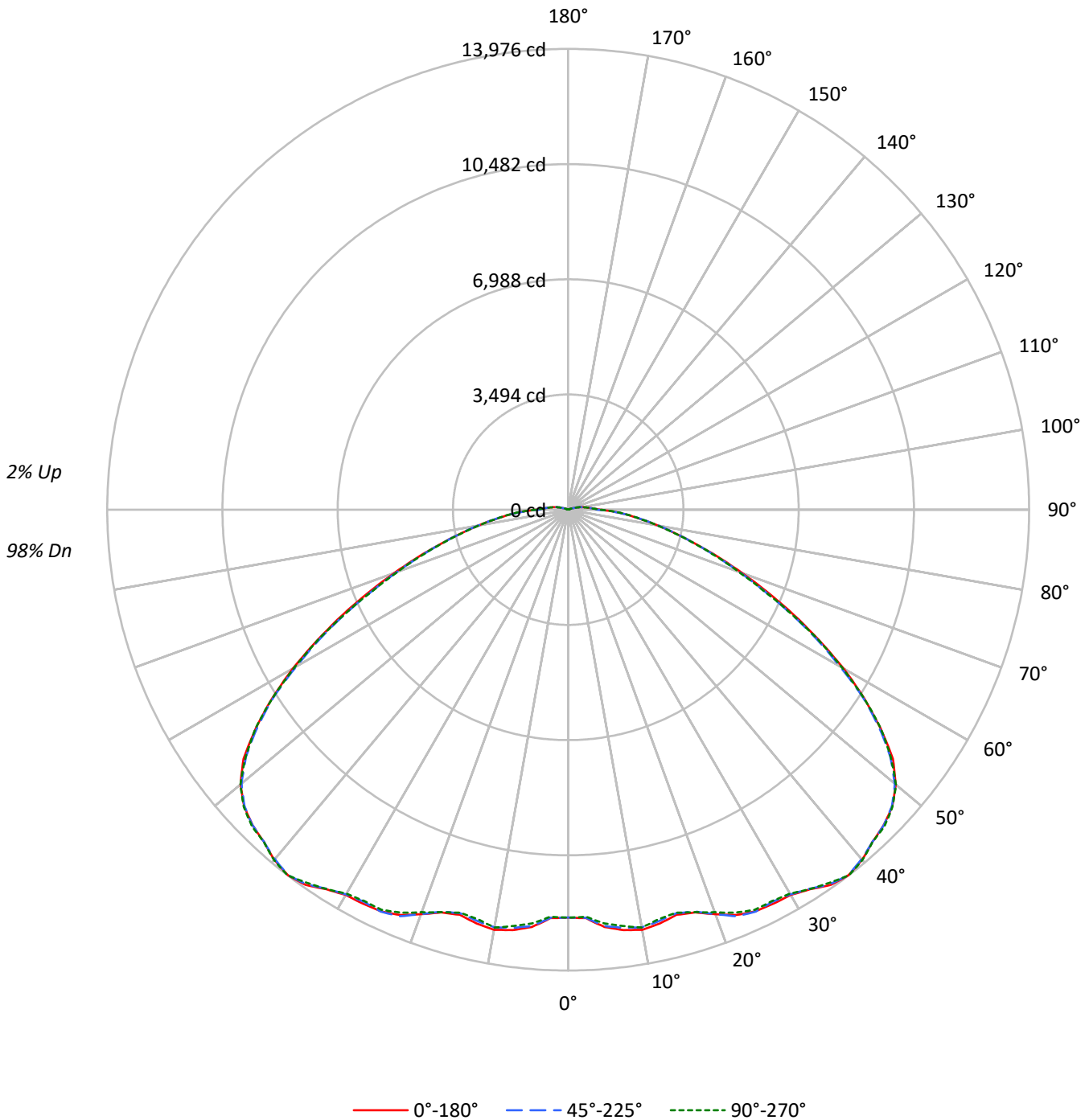
Input Watts (W): 332.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	95398	95398	95398
5°	97347	97127	96531
10°	99237	98658	98701
15°	98405	98001	97890
20°	102667	102658	102187
25°	108319	108409	107917
30°	112413	112220	111998
35°	120678	120428	119994
40°	126826	126612	126978
45°	131840	131882	132207
50°	136194	135774	136264
55°	132752	132179	132969
60°	123293	121690	122584
65°	109609	107852	108318
70°	95079	93778	93270
75°	82156	82020	81744
80°	72998	73498	72765
85°	67744	67909	68366



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1213.5	2.2
10°-20°	3629.1	6.6
20°-30°	6183.6	11.2
30°-40°	8665.8	15.7
40°-50°	10432.1	18.9
50°-60°	10216.4	18.5
60°-70°	7405.7	13.4
70°-80°	4266.1	7.7
80°-90°	1998.6	3.6
90°-100°	716.8	1.3
100°-110°	272.5	0.5
110°-120°	39.0	0.1
120°-130°	14.7	0.0
130°-140°	16.3	0.0
140°-150°	14.0	0.0
150°-160°	8.0	0.0
160°-170°	4.7	0.0
170°-180°	1.6	0.0
0°-30°	11026.2	20.0
0°-40°	19692.0	35.7
0°-60°	40340.6	73.2
0°-90°	54010.9	98.0
90°-120°	1028.3	1.9
90°-150°	1073.2	1.9
90°-180°	1088.0	2.0
0°-180°	55098.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12368	12368	12368	12368	12368	
5°	12705	12645	12676	12665	12598	###
15°	12718	12652	12666	12682	12651	3641
25°	13437	13411	13448	13416	13387	6194
35°	13888	13867	13859	13879	13809	8672
45°	13530	13579	13534	13528	13568	10432
55°	11556	11530	11506	11465	11574	10267
65°	7544	7473	7423	7409	7455	7486
75°	3985	3979	3979	3953	3965	4287
85°	1810	1837	1815	1814	1827	1669
90°	963	954	890	941	964	560
95°	641	644	642	636	638	484
105°	243	246	251	248	245	270
115°	28	27	27	28	27	39
125°	17	17	17	17	17	14
135°	21	21	21	21	21	16
145°	23	22	23	23	22	14
155°	17	17	17	17	17	8
165°	17	17	17	17	17	5
175°	17	17	17	17	17	2
180°	17	17	17	17	17	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	12368.5	12368.5	12368.5	12368.5	12368.5
2.5°	12399.6	12364.1	12388.5	12402.9	12356.3
5°	12704.6	12644.7	12675.8	12664.7	12598.1
7.5°	12857.7	12781.2	12786.7	12792.2	12733.5
10°	12937.6	12872.1	12862.1	12896.5	12867.7
12.5°	12849.9	12764.5	12775.6	12797.8	12713.5
15°	12717.9	12652.5	12665.8	12682.4	12651.4
17.5°	12808.9	12762.3	12775.6	12796.7	12796.7
20°	13051.8	13010.8	13050.7	13031.8	12990.8
22.5°	13304.7	13278.1	13345.7	13285.8	13229.3
25°	13436.7	13411.2	13447.8	13415.6	13386.8
27.5°	13470.0	13438.9	13406.7	13423.4	13383.4
30°	13492.1	13496.6	13468.9	13486.6	13442.2
32.5°	13648.5	13671.8	13628.6	13686.3	13641.9
35°	13888.1	13867.0	13859.3	13879.2	13809.4
37.5°	13969.1	13936.9	13965.8	13966.9	13975.7
40°	13858.2	13821.6	13834.9	13842.6	13874.8
42.5°	13658.5	13678.5	13658.5	13648.5	13663.0
45°	13529.9	13578.7	13534.3	13527.6	13567.6
47.5°	13324.7	13355.7	13312.5	13309.1	13335.7
50°	12965.3	12922.0	12925.3	12938.7	12971.9
52.5°	12407.4	12337.5	12314.2	12297.5	12328.6
55°	11555.5	11530.0	11505.6	11464.6	11574.4
57.5°	10637.1	10556.1	10597.2	10562.8	10626.0
60°	9645.5	9562.3	9520.1	9530.1	9590.0
62.5°	8570.7	8548.5	8488.6	8495.3	8543.0
65°	7543.6	7472.6	7422.7	7409.4	7454.8
67.5°	6535.3	6444.4	6424.4	6386.7	6394.5
70°	5599.2	5547.0	5522.6	5504.9	5492.7
72.5°	4757.3	4728.5	4709.6	4698.5	4699.6
75°	3985.3	3978.7	3978.7	3953.1	3965.3
77.5°	3330.9	3360.8	3336.4	3316.5	3310.9
80°	2756.3	2790.7	2775.2	2756.3	2747.5
82.5°	2245.0	2282.7	2263.8	2256.1	2248.3
85°	1810.2	1836.8	1814.6	1813.5	1826.8
87.5°	1399.8	1409.8	1378.7	1396.5	1428.6
90°	962.8	953.9	889.6	940.6	963.9
92.5°	763.1	769.8	757.6	755.4	760.9
95°	641.1	644.4	642.2	635.6	637.8
97.5°	534.6	541.3	538.0	534.6	534.6
100°	434.8	438.1	440.3	435.9	434.8
102.5°	340.5	342.7	341.6	342.7	341.6
105°	242.9	246.2	250.7	248.5	245.1
107.5°	165.3	166.4	165.3	167.5	168.6
110°	103.2	100.9	98.7	102.0	104.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	55.5	54.4	56.6	55.5	53.2
115°	27.7	26.6	26.6	27.7	26.6
117.5°	15.5	15.5	14.4	15.5	15.5
120°	13.3	13.3	13.3	13.3	14.4
122.5°	14.4	15.5	14.4	15.5	15.5
125°	16.6	16.6	16.6	16.6	16.6
127.5°	17.7	17.7	17.7	17.7	17.7
130°	18.9	18.9	18.9	18.9	18.9
132.5°	20.0	20.0	20.0	20.0	20.0
135°	21.1	21.1	21.1	21.1	21.1
137.5°	22.2	22.2	22.2	22.2	22.2
140°	23.3	23.3	23.3	23.3	22.2
142.5°	23.3	23.3	23.3	23.3	22.2
145°	23.3	22.2	23.3	23.3	22.2
147.5°	22.2	21.1	21.1	22.2	21.1
150°	20.0	20.0	20.0	20.0	20.0
152.5°	17.7	17.7	17.7	17.7	17.7
155°	16.6	16.6	16.6	16.6	16.6
157.5°	16.6	16.6	16.6	16.6	16.6
160°	16.6	16.6	16.6	16.6	16.6
162.5°	16.6	16.6	16.6	16.6	16.6
165°	16.6	16.6	16.6	16.6	16.6
167.5°	16.6	16.6	16.6	16.6	16.6
170°	16.6	16.6	16.6	16.6	16.6
172.5°	16.6	16.6	16.6	16.6	16.6
175°	16.6	16.6	16.6	16.6	16.6
177.5°	15.5	16.6	16.6	16.6	16.6
180°	16.6	16.6	16.6	16.6	16.6

(END OF REPORT)