

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: P381621

Luminaire Tested: **BMK-50-WFL-UNV-L735-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: P381621
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-L735-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: 54080.7 lumens
Efficiency: N/A
Efficacy: 162.6 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

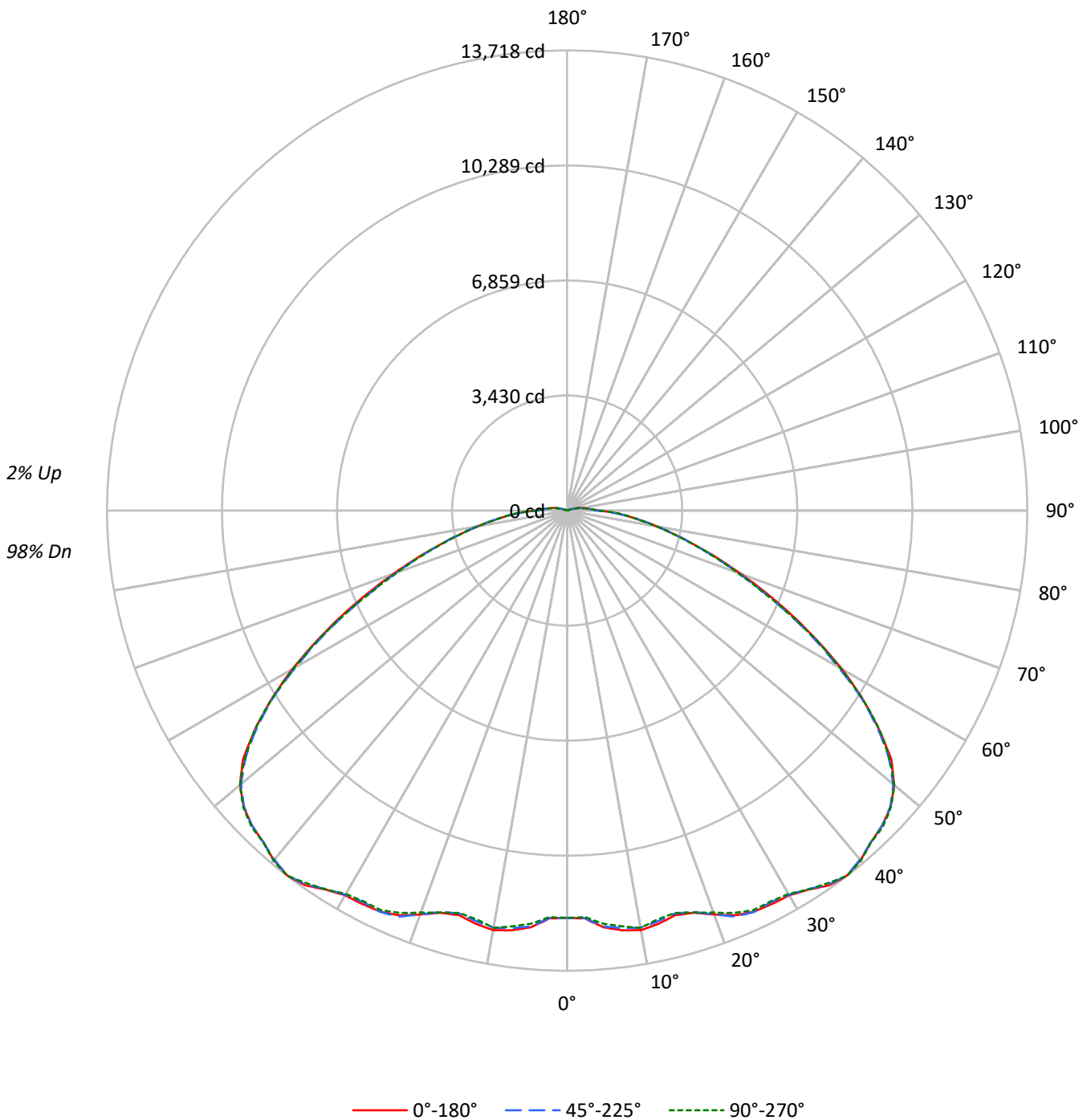
Input Watts (W): 332.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	93636	93636	93636
5°	95549	95332	94748
10°	97404	96836	96878
15°	96587	96191	96082
20°	100770	100762	100299
25°	106319	106407	105924
30°	110337	110147	109929
35°	118449	118203	117778
40°	124483	124273	124632
45°	129404	129446	129764
50°	133678	133267	133747
55°	130300	129737	130513
60°	121015	119443	120320
65°	107583	105860	106318
70°	93321	92046	91547
75°	80639	80505	80235
80°	71650	72140	71419
85°	66495	66655	67105



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1191.1	2.2
10°-20°	3562.0	6.6
20°-30°	6069.4	11.2
30°-40°	8505.7	15.7
40°-50°	10239.4	18.9
50°-60°	10027.7	18.5
60°-70°	7268.9	13.4
70°-80°	4187.3	7.7
80°-90°	1961.7	3.6
90°-100°	703.6	1.3
100°-110°	267.4	0.5
110°-120°	38.2	0.1
120°-130°	14.4	0.0
130°-140°	16.0	0.0
140°-150°	13.8	0.0
150°-160°	7.9	0.0
160°-170°	4.6	0.0
170°-180°	1.6	0.0
0°-30°	10822.6	20.0
0°-40°	19328.3	35.7
0°-60°	39595.4	73.2
0°-90°	53013.2	98.0
90°-120°	1009.3	1.9
90°-150°	1053.4	1.9
90°-180°	1067.0	2.0
0°-180°	54080.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12140	12140	12140	12140	12140	
5°	12470	12411	12442	12431	12365	###
15°	12483	12419	12432	12448	12418	3574
25°	13188	13163	13199	13168	13140	6080
35°	13632	13611	13603	13623	13554	8512
45°	13280	13328	13284	13278	13317	10239
55°	11342	11317	11293	11253	11361	10077
65°	7404	7335	7286	7272	7317	7348
75°	3912	3905	3905	3880	3892	4208
85°	1777	1803	1781	1780	1793	1638
90°	945	936	873	923	946	550
95°	629	632	630	624	626	475
105°	238	242	246	244	241	265
115°	27	26	26	27	26	39
125°	16	16	16	16	16	14
135°	21	21	21	21	21	16
145°	23	22	23	23	22	14
155°	16	16	16	16	16	8
165°	16	16	16	16	16	5
175°	16	16	16	16	16	2
180°	16	16	16	16	16	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	12140.1	12140.1	12140.1	12140.1	12140.1
2.5°	12170.6	12135.7	12159.7	12173.8	12128.1
5°	12469.9	12411.2	12441.6	12430.7	12365.4
7.5°	12620.2	12545.1	12550.5	12556.0	12498.2
10°	12698.6	12634.3	12624.5	12658.3	12630.0
12.5°	12612.6	12528.7	12539.6	12561.4	12478.7
15°	12483.0	12418.8	12431.8	12448.2	12417.7
17.5°	12572.3	12526.6	12539.6	12560.3	12560.3
20°	12810.7	12770.4	12809.6	12791.1	12750.8
22.5°	13058.9	13032.8	13099.2	13040.4	12984.9
25°	13188.5	13163.4	13199.4	13167.8	13139.5
27.5°	13221.1	13190.7	13159.1	13175.4	13136.2
30°	13242.9	13247.3	13220.1	13237.5	13193.9
32.5°	13396.4	13419.3	13376.8	13433.4	13389.9
35°	13631.6	13610.9	13603.3	13622.9	13554.3
37.5°	13711.1	13679.5	13707.8	13708.9	13717.6
40°	13602.2	13566.3	13579.3	13586.9	13618.5
42.5°	13406.2	13425.8	13406.2	13396.4	13410.6
45°	13279.9	13327.8	13284.3	13277.8	13316.9
47.5°	13078.5	13109.0	13066.5	13063.3	13089.4
50°	12725.8	12683.3	12686.6	12699.7	12732.3
52.5°	12178.2	12109.6	12086.7	12070.4	12100.9
55°	11342.1	11317.0	11293.1	11252.8	11360.6
57.5°	10440.6	10361.1	10401.4	10367.7	10429.7
60°	9467.3	9385.7	9344.3	9354.1	9412.9
62.5°	8412.4	8390.6	8331.8	8338.3	8385.1
65°	7404.2	7334.6	7285.6	7272.5	7317.1
67.5°	6414.6	6325.3	6305.7	6268.7	6276.3
70°	5495.7	5444.6	5420.6	5403.2	5391.2
72.5°	4669.4	4641.1	4622.6	4611.7	4612.8
75°	3911.7	3905.2	3905.2	3880.1	3892.1
77.5°	3269.4	3298.8	3274.8	3255.2	3249.8
80°	2705.4	2739.2	2723.9	2705.4	2696.7
82.5°	2203.5	2240.5	2222.0	2214.4	2206.8
85°	1776.8	1802.9	1781.1	1780.0	1793.1
87.5°	1373.9	1383.7	1353.3	1370.7	1402.2
90°	945.0	936.3	873.1	923.2	946.1
92.5°	749.0	755.6	743.6	741.4	746.8
95°	629.3	632.5	630.4	623.8	626.0
97.5°	524.8	531.3	528.0	524.8	524.8
100°	426.8	430.0	432.2	427.9	426.8
102.5°	334.2	336.4	335.3	336.4	335.3
105°	238.4	241.7	246.0	243.9	240.6
107.5°	162.2	163.3	162.2	164.4	165.5
110°	101.2	99.1	96.9	100.2	102.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	54.4	53.3	55.5	54.4	52.3
115°	27.2	26.1	26.1	27.2	26.1
117.5°	15.2	15.2	14.2	15.2	15.2
120°	13.1	13.1	13.1	13.1	14.2
122.5°	14.2	15.2	14.2	15.2	15.2
125°	16.3	16.3	16.3	16.3	16.3
127.5°	17.4	17.4	17.4	17.4	17.4
130°	18.5	18.5	18.5	18.5	18.5
132.5°	19.6	19.6	19.6	19.6	19.6
135°	20.7	20.7	20.7	20.7	20.7
137.5°	21.8	21.8	21.8	21.8	21.8
140°	22.9	22.9	22.9	22.9	21.8
142.5°	22.9	22.9	22.9	22.9	21.8
145°	22.9	21.8	22.9	22.9	21.8
147.5°	21.8	20.7	20.7	21.8	20.7
150°	19.6	19.6	19.6	19.6	19.6
152.5°	17.4	17.4	17.4	17.4	17.4
155°	16.3	16.3	16.3	16.3	16.3
157.5°	16.3	16.3	16.3	16.3	16.3
160°	16.3	16.3	16.3	16.3	16.3
162.5°	16.3	16.3	16.3	16.3	16.3
165°	16.3	16.3	16.3	16.3	16.3
167.5°	16.3	16.3	16.3	16.3	16.3
170°	16.3	16.3	16.3	16.3	16.3
172.5°	16.3	16.3	16.3	16.3	16.3
175°	16.3	16.3	16.3	16.3	16.3
177.5°	15.2	16.3	16.3	16.3	16.3
180°	16.3	16.3	16.3	16.3	16.3

(END OF REPORT)