

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: P381633

Luminaire Tested: **BMK-70-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: P381633
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-70-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: 75049.9 lumens
Efficiency: N/A
Efficacy: 149.9 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

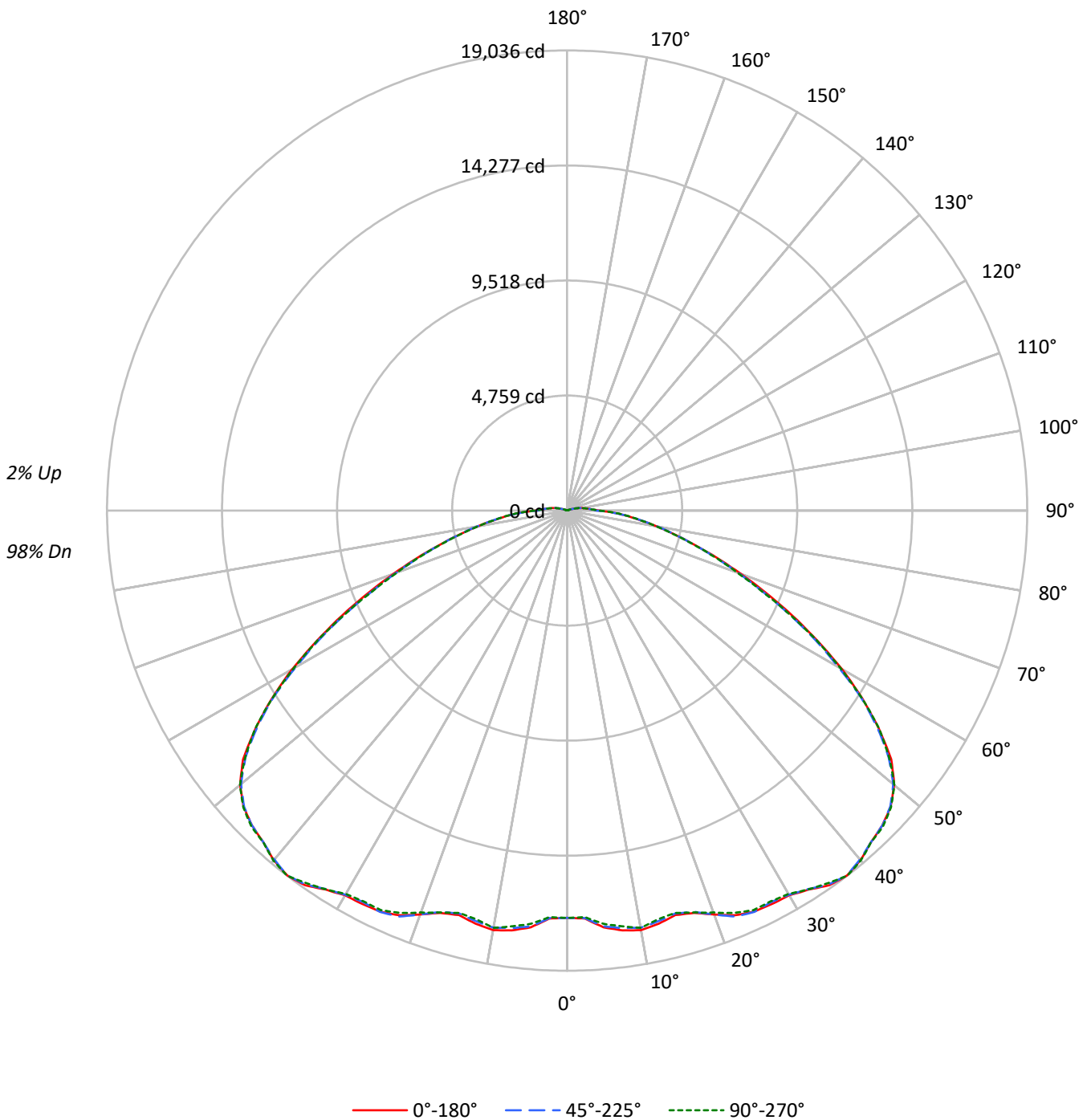
Input Watts (W): 500.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	129941	129941	129941
5°	132597	132296	131486
10°	135171	134382	134441
15°	134037	133488	133336
20°	139843	139831	139189
25°	147543	147664	146994
30°	153119	152855	152553
35°	164377	164035	163444
40°	172750	172459	172956
45°	179579	179637	180079
50°	185511	184939	185605
55°	180822	180041	181117
60°	167939	165755	166972
65°	149297	146906	147542
70°	129507	127736	127043
75°	111905	111718	111344
80°	99432	100112	99111
85°	92276	92500	93122



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1653.0	2.2
10°-20°	4943.2	6.6
20°-30°	8422.7	11.2
30°-40°	11803.7	15.7
40°-50°	14209.6	18.9
50°-60°	13915.8	18.5
60°-70°	10087.3	13.4
70°-80°	5810.8	7.7
80°-90°	2722.3	3.6
90°-100°	976.4	1.3
100°-110°	371.1	0.5
110°-120°	53.1	0.1
120°-130°	20.0	0.0
130°-140°	22.1	0.0
140°-150°	19.1	0.0
150°-160°	11.0	0.0
160°-170°	6.4	0.0
170°-180°	2.2	0.0
0°-30°	15018.9	20.0
0°-40°	26822.6	35.7
0°-60°	54948.0	73.2
0°-90°	73568.4	98.0
90°-120°	1400.6	1.9
90°-150°	1461.9	1.9
90°-180°	1481.0	2.0
0°-180°	75049.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	16847	16847	16847	16847	16847	
5°	17305	17223	17266	17251	17160	###
15°	17323	17234	17252	17275	17232	4959
25°	18302	18267	18317	18274	18234	8437
35°	18917	18888	18878	18905	18810	11812
45°	18429	18496	18435	18426	18480	14209
55°	15740	15705	15672	15616	15766	13985
65°	10275	10178	10110	10092	10154	10197
75°	5428	5419	5419	5385	5401	5839
85°	2466	2502	2472	2470	2488	2274
90°	1311	1299	1212	1281	1313	763
95°	873	878	875	866	869	659
105°	331	335	341	338	334	368
115°	38	36	36	38	36	54
125°	23	23	23	23	23	20
135°	29	29	29	29	29	22
145°	32	30	32	32	30	19
155°	23	23	23	23	23	11
165°	23	23	23	23	23	6
175°	23	23	23	23	23	2
180°	23	23	23	23	23	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	16847.2	16847.2	16847.2	16847.2	16847.2
2.5°	16889.5	16841.2	16874.4	16894.1	16830.6
5°	17305.0	17223.4	17265.7	17250.6	17160.0
7.5°	17513.5	17409.3	17416.8	17424.4	17344.3
10°	17622.3	17533.1	17519.5	17566.4	17527.1
12.5°	17502.9	17386.6	17401.7	17431.9	17317.1
15°	17323.1	17234.0	17252.1	17274.8	17232.5
17.5°	17447.0	17383.6	17401.7	17430.4	17430.4
20°	17777.9	17722.0	17776.4	17750.7	17694.8
22.5°	18122.4	18086.1	18178.3	18096.7	18019.6
25°	18302.2	18267.4	18317.3	18273.5	18234.2
27.5°	18347.5	18305.2	18261.4	18284.0	18229.6
30°	18377.7	18383.7	18346.0	18370.1	18309.7
32.5°	18590.7	18622.5	18563.5	18642.1	18581.7
35°	18917.1	18888.4	18877.8	18905.0	18809.8
37.5°	19027.4	18983.5	19022.8	19024.3	19036.4
40°	18876.3	18826.4	18844.5	18855.1	18898.9
42.5°	18604.3	18631.5	18604.3	18590.7	18610.4
45°	18429.1	18495.5	18435.1	18426.0	18480.4
47.5°	18149.6	18191.9	18132.9	18128.4	18164.7
50°	17660.1	17601.1	17605.7	17623.8	17669.1
52.5°	16900.1	16804.9	16773.2	16750.5	16792.8
55°	15739.8	15705.0	15671.8	15615.9	15765.5
57.5°	14488.8	14378.5	14434.4	14387.6	14473.7
60°	13138.2	13024.8	12967.4	12981.0	13062.6
62.5°	11674.2	11643.9	11562.4	11571.4	11636.4
65°	10275.1	10178.4	10110.5	10092.3	10154.3
67.5°	8901.8	8777.9	8750.7	8699.3	8709.9
70°	7626.7	7555.6	7522.4	7498.2	7481.6
72.5°	6479.9	6440.7	6415.0	6399.9	6401.4
75°	5428.4	5419.3	5419.3	5384.6	5401.2
77.5°	4537.0	4577.8	4544.6	4517.4	4509.8
80°	3754.4	3801.2	3780.1	3754.4	3742.3
82.5°	3057.9	3109.3	3083.6	3073.0	3062.4
85°	2465.7	2501.9	2471.7	2470.2	2488.3
87.5°	1906.7	1920.3	1878.0	1902.1	1945.9
90°	1311.4	1299.3	1211.7	1281.2	1312.9
92.5°	1039.4	1048.5	1031.9	1028.9	1036.4
95°	873.3	877.8	874.8	865.7	868.7
97.5°	728.2	737.3	732.8	728.2	728.2
100°	592.2	596.8	599.8	593.8	592.2
102.5°	463.8	466.8	465.3	466.8	465.3
105°	330.9	335.4	341.4	338.4	333.9
107.5°	225.1	226.6	225.1	228.1	229.6
110°	140.5	137.5	134.5	139.0	142.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	75.5	74.0	77.1	75.5	72.5
115°	37.8	36.3	36.3	37.8	36.3
117.5°	21.2	21.2	19.6	21.2	21.2
120°	18.1	18.1	18.1	18.1	19.6
122.5°	19.6	21.2	19.6	21.2	21.2
125°	22.7	22.7	22.7	22.7	22.7
127.5°	24.2	24.2	24.2	24.2	24.2
130°	25.7	25.7	25.7	25.7	25.7
132.5°	27.2	27.2	27.2	27.2	27.2
135°	28.7	28.7	28.7	28.7	28.7
137.5°	30.2	30.2	30.2	30.2	30.2
140°	31.7	31.7	31.7	31.7	30.2
142.5°	31.7	31.7	31.7	31.7	30.2
145°	31.7	30.2	31.7	31.7	30.2
147.5°	30.2	28.7	28.7	30.2	28.7
150°	27.2	27.2	27.2	27.2	27.2
152.5°	24.2	24.2	24.2	24.2	24.2
155°	22.7	22.7	22.7	22.7	22.7
157.5°	22.7	22.7	22.7	22.7	22.7
160°	22.7	22.7	22.7	22.7	22.7
162.5°	22.7	22.7	22.7	22.7	22.7
165°	22.7	22.7	22.7	22.7	22.7
167.5°	22.7	22.7	22.7	22.7	22.7
170°	22.7	22.7	22.7	22.7	22.7
172.5°	22.7	22.7	22.7	22.7	22.7
175°	22.7	22.7	22.7	22.7	22.7
177.5°	21.2	22.7	22.7	22.7	22.7
180°	22.7	22.7	22.7	22.7	22.7

(END OF REPORT)