

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: P381636

Luminaire Tested: **BMK-70-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: P381636
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-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: 69808.9 lumens
Efficiency: N/A
Efficacy: 139.4 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

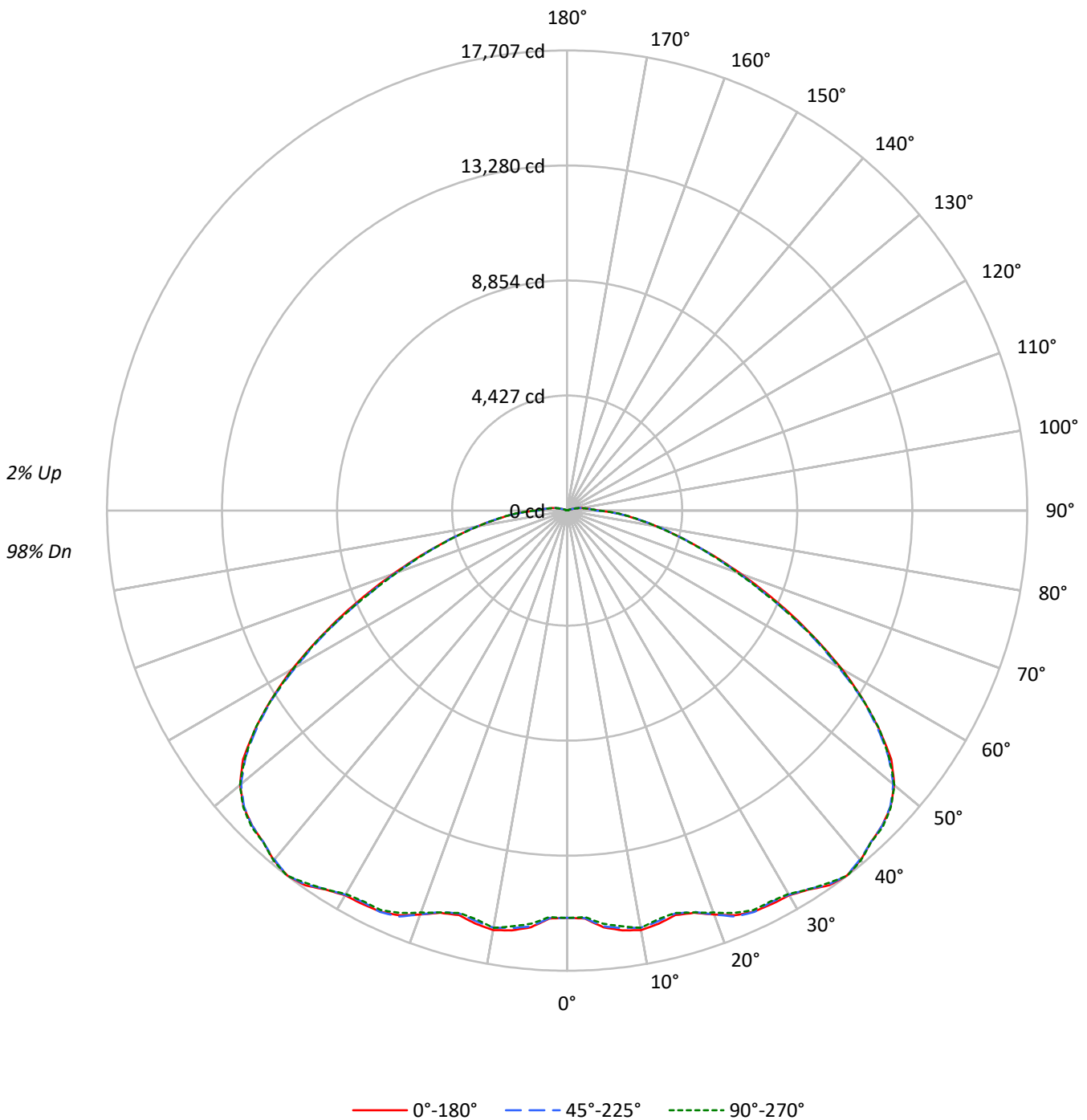
Input Watts (W): 500.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	120867	120867	120867
5°	123337	123058	122304
10°	125731	124998	125052
15°	124677	124166	124025
20°	130077	130066	129469
25°	137238	137352	136729
30°	142426	142180	141900
35°	152897	152580	152030
40°	160686	160415	160878
45°	167038	167093	167504
50°	172556	172024	172644
55°	168194	167468	168469
60°	156211	154181	155312
65°	138872	136646	137239
70°	120463	118816	118171
75°	104090	103917	103569
80°	92487	93120	92191
85°	85831	86041	86621



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1537.5	2.2
10°-20°	4598.0	6.6
20°-30°	7834.5	11.2
30°-40°	10979.4	15.7
40°-50°	13217.3	18.9
50°-60°	12944.1	18.5
60°-70°	9382.9	13.4
70°-80°	5405.0	7.7
80°-90°	2532.2	3.6
90°-100°	908.2	1.3
100°-110°	345.2	0.5
110°-120°	49.4	0.1
120°-130°	18.6	0.0
130°-140°	20.6	0.0
140°-150°	17.8	0.0
150°-160°	10.2	0.0
160°-170°	6.0	0.0
170°-180°	2.0	0.0
0°-30°	13970.0	20.0
0°-40°	24949.4	35.7
0°-60°	51110.8	73.2
0°-90°	68430.9	98.0
90°-120°	1302.8	1.9
90°-150°	1359.8	1.9
90°-180°	1378.0	2.0
0°-180°	69808.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	15671	15671	15671	15671	15671	
5°	16096	16021	16060	16046	15962	###
15°	16113	16030	16047	16068	16029	4613
25°	17024	16992	17038	16997	16961	7848
35°	17596	17569	17560	17585	17496	10987
45°	17142	17204	17148	17139	17190	13217
55°	14641	14608	14577	14525	14664	13008
65°	9558	9468	9404	9388	9445	9485
75°	5049	5041	5041	5009	5024	5432
85°	2294	2327	2299	2298	2315	2115
90°	1220	1209	1127	1192	1221	710
95°	812	816	814	805	808	613
105°	308	312	318	315	311	343
115°	35	34	34	35	34	50
125°	21	21	21	21	21	18
135°	27	27	27	27	27	21
145°	30	28	30	30	28	18
155°	21	21	21	21	21	10
165°	21	21	21	21	21	6
175°	21	21	21	21	21	2
180°	21	21	21	21	21	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	15670.7	15670.7	15670.7	15670.7	15670.7
2.5°	15710.1	15665.1	15696.0	15714.3	15655.3
5°	16096.5	16020.6	16060.0	16045.9	15961.6
7.5°	16290.5	16193.5	16200.5	16207.5	16133.1
10°	16391.6	16308.7	16296.1	16339.6	16303.1
12.5°	16280.6	16172.4	16186.5	16214.6	16107.8
15°	16113.4	16030.5	16047.3	16068.4	16029.1
17.5°	16228.6	16169.6	16186.5	16213.2	16213.2
20°	16536.4	16484.4	16535.0	16511.1	16459.1
22.5°	16856.8	16823.1	16908.8	16832.9	16761.2
25°	17024.0	16991.7	17038.1	16997.3	16960.8
27.5°	17066.2	17026.8	16986.1	17007.2	16956.6
30°	17094.3	17099.9	17064.8	17087.3	17031.1
32.5°	17292.5	17322.0	17267.2	17340.2	17284.0
35°	17596.0	17569.3	17559.5	17584.8	17496.2
37.5°	17698.6	17657.8	17694.4	17695.8	17707.0
40°	17558.1	17511.7	17528.5	17538.4	17579.1
42.5°	17305.1	17330.4	17305.1	17292.5	17310.7
45°	17142.1	17203.9	17147.7	17139.3	17189.9
47.5°	16882.1	16921.5	16866.6	16862.4	16896.2
50°	16426.8	16372.0	16376.2	16393.1	16435.2
52.5°	15719.9	15631.4	15601.9	15580.8	15620.1
55°	14640.6	14608.3	14577.4	14525.4	14664.5
57.5°	13477.0	13374.4	13426.4	13382.9	13463.0
60°	12220.7	12115.3	12061.9	12074.5	12150.4
62.5°	10858.9	10830.8	10754.9	10763.3	10823.8
65°	9557.6	9467.6	9404.4	9387.5	9445.2
67.5°	8280.1	8164.9	8139.6	8091.8	8101.7
70°	7094.1	7028.0	6997.1	6974.6	6959.1
72.5°	6027.4	5990.9	5967.0	5952.9	5954.3
75°	5049.3	5040.9	5040.9	5008.6	5024.0
77.5°	4220.2	4258.1	4227.2	4201.9	4194.9
80°	3492.2	3535.8	3516.1	3492.2	3481.0
82.5°	2844.4	2892.1	2868.3	2858.4	2848.6
85°	2293.5	2327.2	2299.1	2297.7	2314.6
87.5°	1773.5	1786.2	1746.8	1769.3	1810.1
90°	1219.8	1208.6	1127.1	1191.7	1221.2
92.5°	966.9	975.3	959.8	957.0	964.0
95°	812.3	816.5	813.7	805.2	808.1
97.5°	677.4	685.8	681.6	677.4	677.4
100°	550.9	555.1	557.9	552.3	550.9
102.5°	431.4	434.2	432.8	434.2	432.8
105°	307.8	312.0	317.6	314.8	310.6
107.5°	209.4	210.8	209.4	212.2	213.6
110°	130.7	127.9	125.1	129.3	132.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	70.3	68.9	71.7	70.3	67.5
115°	35.1	33.7	33.7	35.1	33.7
117.5°	19.7	19.7	18.3	19.7	19.7
120°	16.9	16.9	16.9	16.9	18.3
122.5°	18.3	19.7	18.3	19.7	19.7
125°	21.1	21.1	21.1	21.1	21.1
127.5°	22.5	22.5	22.5	22.5	22.5
130°	23.9	23.9	23.9	23.9	23.9
132.5°	25.3	25.3	25.3	25.3	25.3
135°	26.7	26.7	26.7	26.7	26.7
137.5°	28.1	28.1	28.1	28.1	28.1
140°	29.5	29.5	29.5	29.5	28.1
142.5°	29.5	29.5	29.5	29.5	28.1
145°	29.5	28.1	29.5	29.5	28.1
147.5°	28.1	26.7	26.7	28.1	26.7
150°	25.3	25.3	25.3	25.3	25.3
152.5°	22.5	22.5	22.5	22.5	22.5
155°	21.1	21.1	21.1	21.1	21.1
157.5°	21.1	21.1	21.1	21.1	21.1
160°	21.1	21.1	21.1	21.1	21.1
162.5°	21.1	21.1	21.1	21.1	21.1
165°	21.1	21.1	21.1	21.1	21.1
167.5°	21.1	21.1	21.1	21.1	21.1
170°	21.1	21.1	21.1	21.1	21.1
172.5°	21.1	21.1	21.1	21.1	21.1
175°	21.1	21.1	21.1	21.1	21.1
177.5°	19.7	21.1	21.1	21.1	21.1
180°	21.1	21.1	21.1	21.1	21.1

(END OF REPORT)