

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: P381635

Luminaire Tested: **BMK-70-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: P381635
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-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: 76462.3 lumens
Efficiency: N/A
Efficacy: 152.7 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

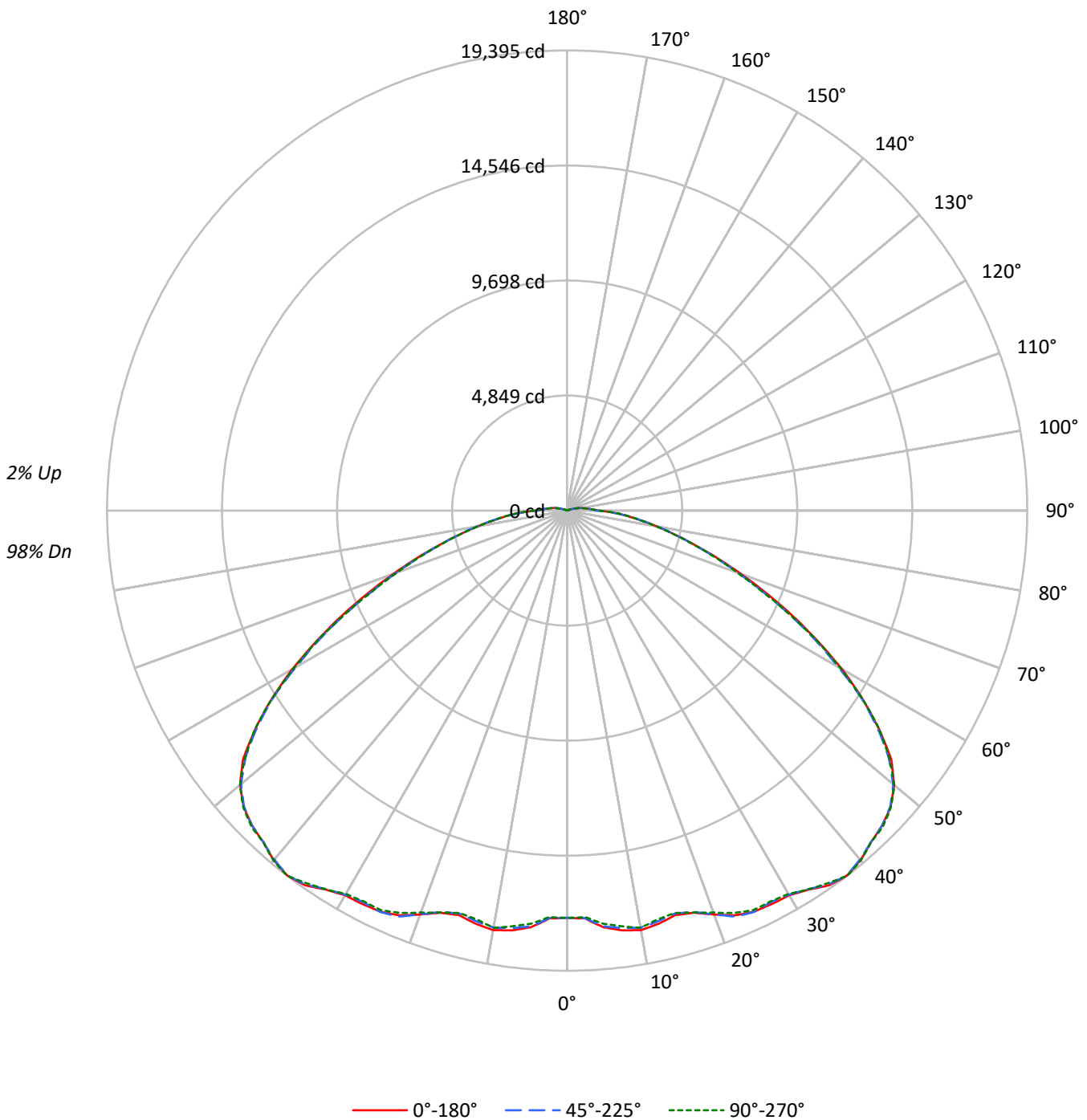
Input Watts (W): 500.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	132387	132387	132387
5°	135093	134786	133960
10°	137714	136912	136971
15°	136560	136000	135846
20°	142475	142462	141809
25°	150319	150443	149760
30°	156001	155731	155424
35°	167470	167123	166520
40°	176000	175705	176212
45°	182958	183019	183468
50°	189001	188419	189098
55°	184225	183429	184526
60°	171098	168876	170114
65°	152108	149669	150319
70°	131944	130141	129434
75°	114012	113820	113441
80°	101304	101995	100976
85°	94012	94241	94877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1684.1	2.2
10°-20°	5036.2	6.6
20°-30°	8581.3	11.2
30°-40°	12025.8	15.7
40°-50°	14477.1	18.9
50°-60°	14177.7	18.5
60°-70°	10277.1	13.4
70°-80°	5920.2	7.7
80°-90°	2773.5	3.6
90°-100°	994.8	1.3
100°-110°	378.1	0.5
110°-120°	54.1	0.1
120°-130°	20.4	0.0
130°-140°	22.6	0.0
140°-150°	19.5	0.0
150°-160°	11.2	0.0
160°-170°	6.5	0.0
170°-180°	2.2	0.0
0°-30°	15301.5	20.0
0°-40°	27327.4	35.7
0°-60°	55982.2	73.2
0°-90°	74953.0	98.0
90°-120°	1426.9	1.9
90°-150°	1489.3	1.9
90°-180°	1509.0	2.0
0°-180°	76462.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	17164	17164	17164	17164	17164	
5°	17631	17548	17591	17575	17483	###
15°	17649	17558	17577	17600	17557	5053
25°	18647	18611	18662	18617	18577	8596
35°	19273	19244	19233	19261	19164	12034
45°	18776	18844	18782	18773	18828	14477
55°	16036	16001	15967	15910	16062	14248
65°	10468	10370	10301	10282	10345	10389
75°	5531	5521	5521	5486	5503	5949
85°	2512	2549	2518	2517	2535	2316
90°	1336	1324	1234	1305	1338	777
95°	890	894	891	882	885	671
105°	337	342	348	345	340	375
115°	38	37	37	38	37	55
125°	23	23	23	23	23	20
135°	29	29	29	29	29	23
145°	32	31	32	32	31	20
155°	23	23	23	23	23	11
165°	23	23	23	23	23	7
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°	17164.3	17164.3	17164.3	17164.3	17164.3
2.5°	17207.4	17158.1	17192.0	17212.0	17147.4
5°	17630.7	17547.6	17590.7	17575.3	17482.9
7.5°	17843.1	17736.9	17744.6	17752.3	17670.7
10°	17953.9	17863.1	17849.3	17897.0	17857.0
12.5°	17832.3	17713.8	17729.2	17760.0	17643.0
15°	17649.2	17558.3	17576.8	17599.9	17556.8
17.5°	17775.4	17710.7	17729.2	17758.4	17758.4
20°	18112.5	18055.5	18110.9	18084.8	18027.8
22.5°	18463.4	18426.5	18520.4	18437.3	18358.8
25°	18646.6	18611.2	18662.0	18617.3	18577.3
27.5°	18692.8	18649.7	18605.0	18628.1	18572.7
30°	18723.6	18729.7	18691.2	18715.9	18654.3
32.5°	18940.6	18972.9	18912.9	18992.9	18931.4
35°	19273.1	19243.8	19233.1	19260.8	19163.8
37.5°	19385.4	19340.8	19380.8	19382.4	19394.7
40°	19231.5	19180.7	19199.2	19210.0	19254.6
42.5°	18954.4	18982.2	18954.4	18940.6	18960.6
45°	18775.9	18843.6	18782.1	18772.8	18828.2
47.5°	18491.1	18534.2	18474.2	18469.6	18506.5
50°	17992.4	17932.4	17937.0	17955.5	18001.6
52.5°	17218.2	17121.2	17088.9	17065.8	17108.9
55°	16036.0	16000.6	15966.7	15909.8	16062.2
57.5°	14761.5	14649.1	14706.1	14658.4	14746.1
60°	13385.4	13270.0	13211.5	13225.3	13308.4
62.5°	11893.9	11863.1	11780.0	11789.2	11855.4
65°	10468.5	10370.0	10300.7	10282.3	10345.4
67.5°	9069.3	8943.1	8915.4	8863.1	8873.8
70°	7770.2	7697.8	7664.0	7639.3	7622.4
72.5°	6601.9	6561.9	6535.7	6520.3	6521.8
75°	5530.6	5521.3	5521.3	5485.9	5502.9
77.5°	4622.4	4664.0	4630.1	4602.4	4594.7
80°	3825.1	3872.8	3851.2	3825.1	3812.7
82.5°	3115.5	3167.8	3141.6	3130.9	3120.1
85°	2512.1	2549.0	2518.2	2516.7	2535.2
87.5°	1942.5	1956.4	1913.3	1937.9	1982.6
90°	1336.1	1323.8	1234.5	1305.3	1337.6
92.5°	1059.0	1068.2	1051.3	1048.2	1055.9
95°	889.7	894.3	891.2	882.0	885.1
97.5°	741.9	751.2	746.5	741.9	741.9
100°	603.4	608.0	611.1	604.9	603.4
102.5°	472.6	475.6	474.1	475.6	474.1
105°	337.1	341.7	347.9	344.8	340.2
107.5°	229.3	230.9	229.3	232.4	234.0
110°	143.2	140.1	137.0	141.6	144.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	77.0	75.4	78.5	77.0	73.9
115°	38.5	36.9	36.9	38.5	36.9
117.5°	21.5	21.5	20.0	21.5	21.5
120°	18.5	18.5	18.5	18.5	20.0
122.5°	20.0	21.5	20.0	21.5	21.5
125°	23.1	23.1	23.1	23.1	23.1
127.5°	24.6	24.6	24.6	24.6	24.6
130°	26.2	26.2	26.2	26.2	26.2
132.5°	27.7	27.7	27.7	27.7	27.7
135°	29.2	29.2	29.2	29.2	29.2
137.5°	30.8	30.8	30.8	30.8	30.8
140°	32.3	32.3	32.3	32.3	30.8
142.5°	32.3	32.3	32.3	32.3	30.8
145°	32.3	30.8	32.3	32.3	30.8
147.5°	30.8	29.2	29.2	30.8	29.2
150°	27.7	27.7	27.7	27.7	27.7
152.5°	24.6	24.6	24.6	24.6	24.6
155°	23.1	23.1	23.1	23.1	23.1
157.5°	23.1	23.1	23.1	23.1	23.1
160°	23.1	23.1	23.1	23.1	23.1
162.5°	23.1	23.1	23.1	23.1	23.1
165°	23.1	23.1	23.1	23.1	23.1
167.5°	23.1	23.1	23.1	23.1	23.1
170°	23.1	23.1	23.1	23.1	23.1
172.5°	23.1	23.1	23.1	23.1	23.1
175°	23.1	23.1	23.1	23.1	23.1
177.5°	21.5	23.1	23.1	23.1	23.1
180°	23.1	23.1	23.1	23.1	23.1

(END OF REPORT)