

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: P381707

Luminaire Tested: **BMK-70-MFL-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: P381707
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-5)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-70-MFL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH MEDIUM FROSTED LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

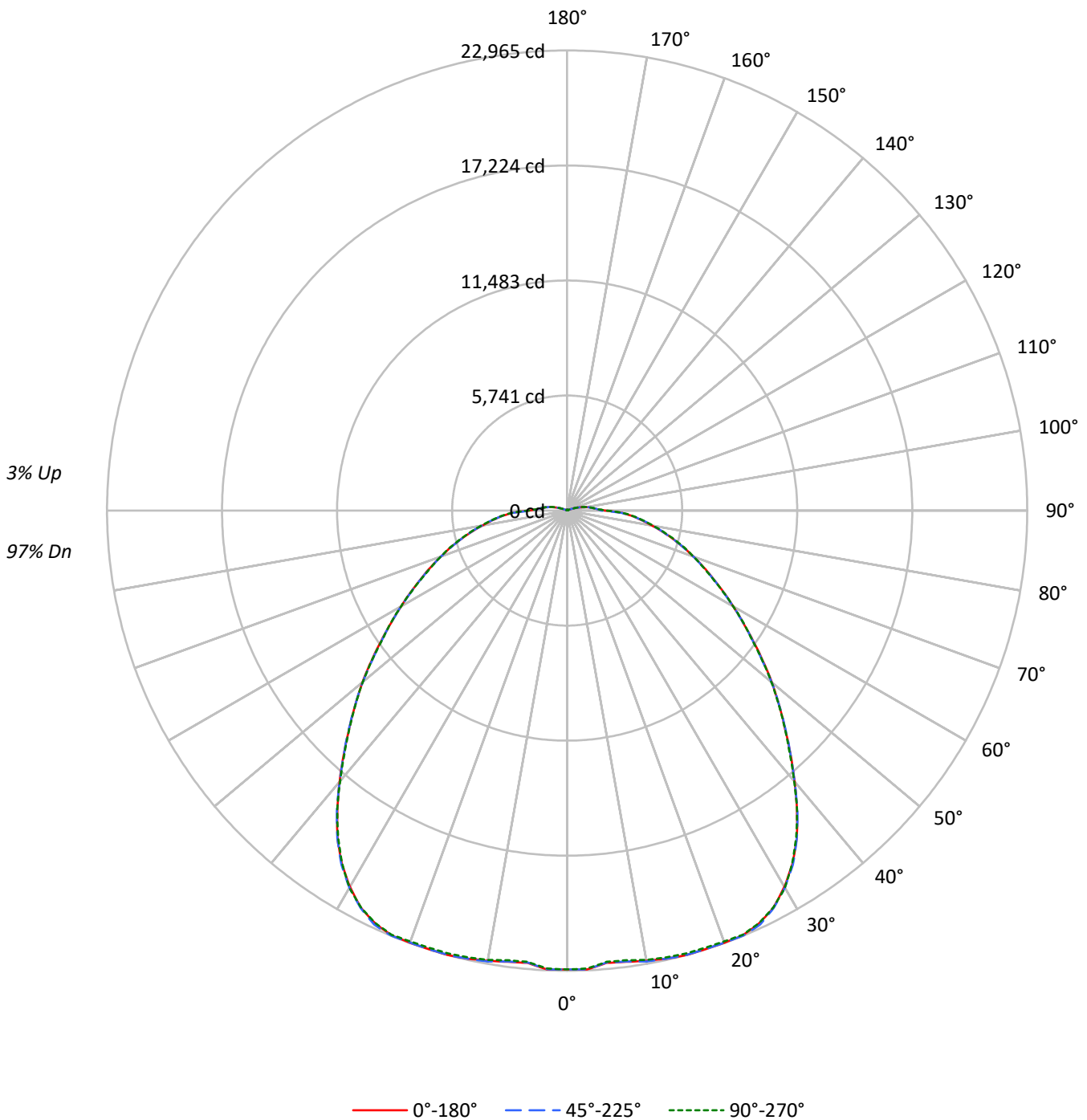
Lumens per Lamp: N/A
Luminaire Lumens: 73300.6 lumens
Efficiency: N/A
Efficacy: 146.4 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.36 / 1.38
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	97
1	107	101	97	92	104	99	95	91	94	90	87	89	87	84	85	83	81	78
2	97	88	81	75	94	86	79	74	82	76	71	78	73	69	75	71	67	65
3	88	77	69	62	85	76	68	61	72	65	60	69	63	58	66	61	57	55
4	81	69	60	53	78	67	59	52	64	57	51	61	55	50	59	53	49	47
5	74	61	52	45	72	60	51	45	57	50	44	55	49	43	53	47	43	40
6	69	55	46	40	67	54	46	39	52	44	39	50	43	38	48	42	38	35
7	64	50	41	35	62	49	41	35	47	40	34	46	39	34	44	38	33	31
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	40	34	30	28
9	55	42	34	28	54	41	33	28	40	33	28	39	32	27	37	31	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	176603	176603	176603
5°	173605	173464	173228
10°	175004	175264	174638
15°	177689	177665	177070
20°	180497	180461	179965
25°	183107	183764	182970
30°	180628	181039	181078
35°	173640	173653	173145
40°	161678	161636	161269
45°	149843	150039	149693
50°	140061	139947	139786
55°	130099	129763	129533
60°	122384	122286	122384
65°	116884	116638	116169
70°	113860	113598	113938
75°	112554	112649	113697
80°	113738	114758	115817
85°	123105	123682	125811



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2170.1	3.0
10°-20°	6494.9	8.9
20°-30°	10436.5	14.2
30°-40°	12425.7	17.0
40°-50°	11902.6	16.2
50°-60°	10155.0	13.9
60°-70°	7987.2	10.9
70°-80°	5796.8	7.9
80°-90°	3542.4	4.8
90°-100°	1494.6	2.0
100°-110°	671.0	0.9
110°-120°	101.5	0.1
120°-130°	30.7	0.0
130°-140°	34.2	0.0
140°-150°	29.0	0.0
150°-160°	16.0	0.0
160°-170°	9.3	0.0
170°-180°	3.1	0.0
0°-30°	19101.4	26.1
0°-40°	31527.1	43.0
0°-60°	53584.8	73.1
0°-90°	70911.2	96.7
90°-120°	2267.1	3.1
90°-150°	2361.0	3.2
90°-180°	2389.0	3.3
0°-180°	73300.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	22897	22897	22897	22897	22897	
5°	22657	22611	22638	22665	22608	###
15°	22965	22886	22962	22996	22885	6499
25°	22714	22708	22795	22775	22697	10431
35°	19983	19954	19985	20006	19926	12422
45°	15378	15427	15398	15404	15362	11902
55°	11325	11329	11295	11285	11275	10174
65°	8044	8026	8027	8010	7995	8007
75°	5460	5488	5464	5457	5515	5783
85°	3290	3339	3305	3303	3362	2883
90°	1895	1898	1716	1866	1938	1107
95°	1333	1362	1347	1338	1352	1021
105°	617	633	628	630	637	662
115°	66	69	69	68	66	98
125°	34	35	34	34	35	30
135°	45	45	45	45	45	34
145°	48	48	48	48	46	29
155°	32	34	32	32	32	16
165°	34	32	32	32	32	10
175°	32	32	32	32	34	3
180°	32	32	32	32	32	



TEST NUMBER: P381707

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	22897.0	22897.0	22897.0	22897.0	22897.0
2.5°	22921.6	22863.1	22912.4	22929.3	22867.7
5°	22656.9	22610.7	22638.4	22664.6	22607.6
7.5°	22712.3	22639.9	22695.3	22709.2	22627.6
10°	22815.4	22812.3	22849.3	22833.9	22767.7
12.5°	22900.1	22864.7	22904.7	22910.8	22838.5
15°	22964.7	22886.2	22961.6	22995.5	22884.7
17.5°	22944.7	22863.1	22949.3	22995.5	22880.1
20°	22946.2	22849.3	22941.6	22975.5	22878.5
22.5°	22938.6	22880.1	22958.6	22997.0	22909.3
25°	22713.8	22707.7	22795.4	22775.4	22696.9
27.5°	22324.4	22292.0	22342.8	22362.9	22309.0
30°	21679.4	21657.9	21728.7	21767.1	21733.3
32.5°	20922.1	20919.0	20963.6	20929.8	20892.8
35°	19983.1	19953.9	19984.6	20006.2	19926.2
37.5°	18837.9	18841.0	18881.0	18820.9	18851.7
40°	17666.5	17684.9	17661.9	17644.9	17621.8
42.5°	16498.1	16515.1	16499.7	16495.1	16441.2
45°	15377.5	15426.8	15397.6	15403.7	15362.1
47.5°	14333.9	14349.3	14346.2	14323.1	14315.4
50°	13333.4	13322.6	13322.6	13265.6	13307.2
52.5°	12312.8	12315.9	12254.3	12235.8	12283.6
55°	11324.6	11329.2	11295.3	11284.6	11275.3
57.5°	10413.3	10405.6	10413.3	10381.0	10434.9
60°	9574.4	9569.8	9566.7	9539.0	9574.4
62.5°	8792.4	8777.1	8769.4	8754.0	8770.9
65°	8044.3	8025.9	8027.4	8010.5	7995.1
67.5°	7360.9	7347.0	7339.4	7336.3	7320.9
70°	6705.2	6695.9	6689.8	6674.4	6709.8
72.5°	6077.1	6081.7	6060.2	6046.3	6120.2
75°	5459.9	5487.6	5464.5	5456.8	5515.3
77.5°	4865.7	4911.9	4884.2	4881.1	4930.4
80°	4294.6	4348.5	4333.1	4319.3	4373.1
82.5°	3775.9	3835.9	3814.4	3795.9	3843.6
85°	3289.5	3338.7	3304.9	3303.3	3361.8
87.5°	2760.0	2804.6	2732.2	2770.7	2820.0
90°	1894.9	1897.9	1716.3	1865.6	1938.0
92.5°	1528.5	1557.8	1523.9	1531.6	1547.0
95°	1333.0	1362.3	1346.9	1337.6	1351.5
97.5°	1157.5	1182.2	1166.8	1165.2	1177.6
100°	982.1	999.0	985.1	989.8	999.0
102.5°	808.1	823.5	815.8	818.9	831.2
105°	617.3	632.6	628.0	629.6	637.3
107.5°	438.7	446.4	438.7	441.8	452.6
110°	274.0	281.7	269.4	277.1	290.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	141.6	150.9	153.9	150.9	146.2
115°	66.2	69.3	69.3	67.7	66.2
117.5°	32.3	32.3	30.8	32.3	32.3
120°	27.7	29.2	27.7	27.7	29.2
122.5°	30.8	32.3	30.8	30.8	32.3
125°	33.9	35.4	33.9	33.9	35.4
127.5°	36.9	38.5	36.9	36.9	38.5
130°	40.0	40.0	40.0	40.0	40.0
132.5°	41.6	43.1	41.6	41.6	43.1
135°	44.6	44.6	44.6	44.6	44.6
137.5°	46.2	46.2	46.2	46.2	47.7
140°	47.7	47.7	47.7	47.7	47.7
142.5°	49.3	47.7	47.7	49.3	47.7
145°	47.7	47.7	47.7	47.7	46.2
147.5°	44.6	44.6	44.6	44.6	44.6
150°	40.0	40.0	40.0	40.0	40.0
152.5°	35.4	35.4	35.4	35.4	35.4
155°	32.3	33.9	32.3	32.3	32.3
157.5°	33.9	33.9	32.3	32.3	32.3
160°	33.9	33.9	32.3	32.3	32.3
162.5°	33.9	33.9	32.3	32.3	32.3
165°	33.9	32.3	32.3	32.3	32.3
167.5°	33.9	32.3	32.3	32.3	32.3
170°	33.9	33.9	32.3	32.3	32.3
172.5°	32.3	33.9	32.3	32.3	32.3
175°	32.3	32.3	32.3	32.3	33.9
177.5°	30.8	30.8	32.3	32.3	33.9
180°	32.3	32.3	32.3	32.3	32.3

(END OF REPORT)