

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: P381725

Luminaire Tested: **BMK-70-MCL-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: P381725
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-6)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-70-MCL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH MEDIUM CLEAR LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 74799.9 lumens
Efficiency: N/A
Efficacy: 149.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.41 / 1.39
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

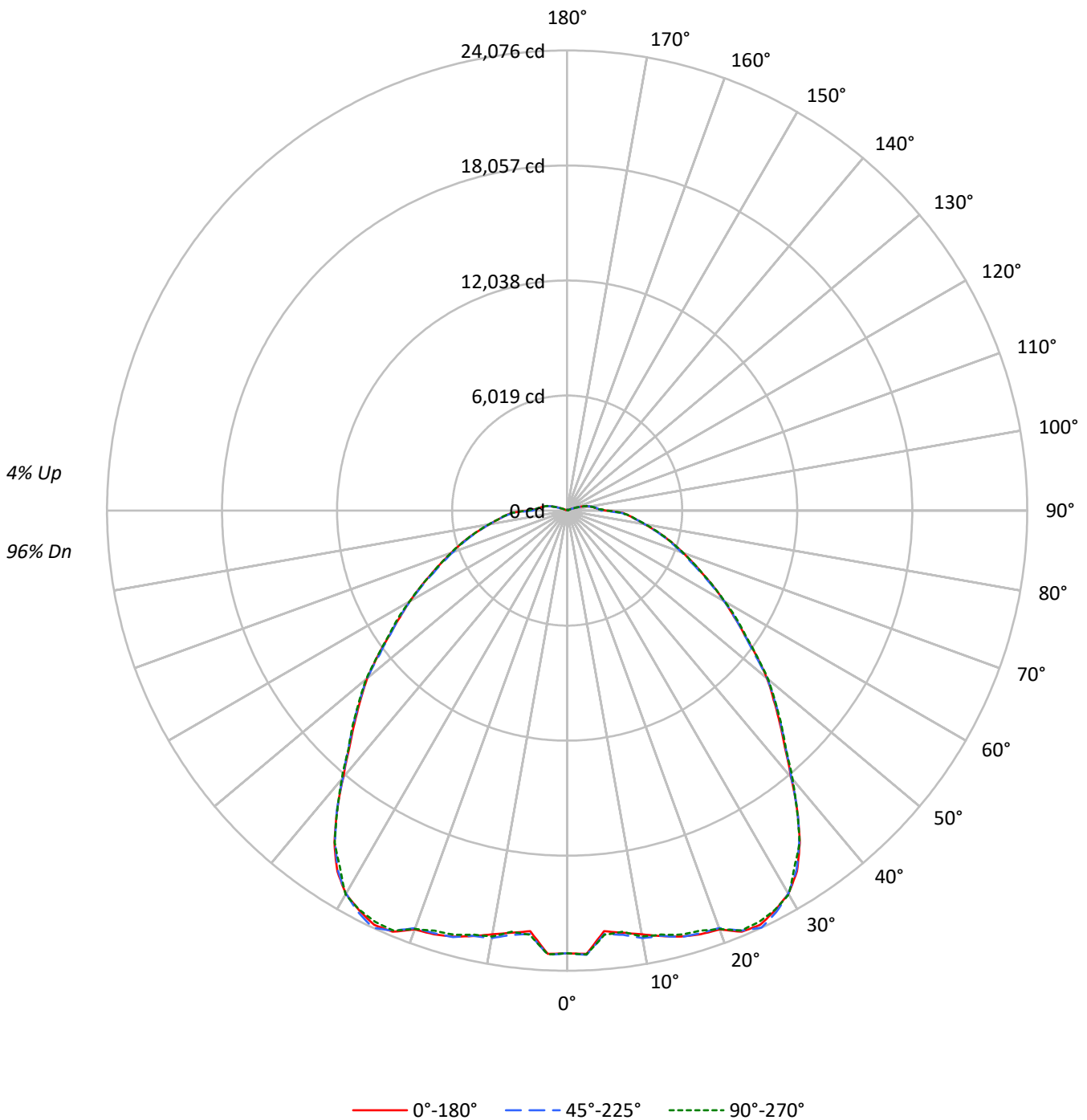
Input Watts (W): 500.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	96
1	107	102	97	93	104	99	95	91	94	90	87	89	87	84	85	83	81	78
2	97	88	81	75	94	86	80	74	82	77	72	78	74	70	75	71	68	65
3	89	78	69	63	86	76	68	62	72	66	60	69	63	59	66	61	57	55
4	81	69	60	53	79	67	59	53	64	57	52	62	55	50	59	54	49	47
5	75	62	53	46	72	60	52	45	58	50	45	55	49	44	53	48	43	41
6	69	56	47	40	67	54	46	40	52	45	39	50	44	38	48	42	38	36
7	64	50	42	35	62	49	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	37	32	58	45	37	31	43	36	31	42	35	31	41	35	30	28
9	56	42	34	28	54	41	34	28	40	33	28	39	32	28	37	32	27	25
10	52	39	31	26	51	38	31	26	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	178620	178620	178620
5°	169216	170372	170750
10°	172689	174188	173562
15°	178509	178736	177712
20°	183378	182881	183232
25°	192771	194087	191432
30°	192874	192785	193273
35°	184419	183964	184231
40°	166804	167029	168002
45°	153262	154012	154507
50°	143407	143649	144231
55°	130257	129850	130859
60°	121419	121302	121793
65°	113686	112253	113774
70°	109389	108003	109572
75°	108555	107063	108460
80°	108847	109172	110557
85°	123102	122585	124775



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2148.1	2.9
10°-20°	6528.3	8.7
20°-30°	10945.2	14.6
30°-40°	13127.7	17.6
40°-50°	12236.6	16.4
50°-60°	10206.4	13.6
60°-70°	7753.9	10.4
70°-80°	5531.1	7.4
80°-90°	3504.7	4.7
90°-100°	1683.3	2.3
100°-110°	876.4	1.2
110°-120°	118.9	0.2
120°-130°	35.5	0.0
130°-140°	39.4	0.1
140°-150°	33.1	0.0
150°-160°	17.7	0.0
160°-170°	10.1	0.0
170°-180°	3.4	0.0
0°-30°	19621.6	26.2
0°-40°	32749.3	43.8
0°-60°	55192.3	73.8
0°-90°	71982.0	96.2
90°-120°	2678.6	3.6
90°-150°	2786.6	3.7
90°-180°	2818.0	3.8
0°-180°	74799.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	23158	23158	23158	23158	23158	
5°	22084	22180	22235	22250	22284	###
15°	23071	23008	23100	23151	22968	6534
25°	23913	23962	24076	23900	23746	10939
35°	21224	21165	21171	21239	21202	13143
45°	15728	15770	15805	15824	15856	12190
55°	11338	11309	11303	11274	11391	10229
65°	7824	7689	7726	7740	7830	7810
75°	5266	5227	5194	5206	5261	5554
85°	3289	3289	3276	3262	3334	2855
90°	2033	1955	1790	1933	2066	1188
95°	1492	1550	1553	1507	1498	1175
105°	844	853	845	837	854	882
115°	68	72	74	71	72	116
125°	40	40	38	40	42	35
135°	51	51	51	51	52	39
145°	55	54	54	54	52	34
155°	37	37	35	35	37	18
165°	37	35	35	35	35	10
175°	34	35	34	35	37	3
180°	35	35	35	35	35	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	23158.5	23158.5	23158.5	23158.5	23158.5
2.5°	23215.4	23155.4	23264.7	23303.2	23243.1
5°	22084.1	22179.5	22234.9	22250.3	22284.2
7.5°	22276.5	22179.5	22384.2	22384.2	22225.7
10°	22513.5	22738.2	22709.0	22672.1	22627.4
12.5°	22804.4	22795.2	22792.1	22759.8	22722.9
15°	23070.7	23007.6	23100.0	23150.8	22967.6
17.5°	23240.1	23063.0	23186.2	23272.4	23049.2
20°	23312.4	23129.2	23249.3	23394.0	23293.9
22.5°	23854.2	23738.8	23786.5	23894.2	23781.9
25°	23912.7	23962.0	24075.9	23900.4	23746.5
27.5°	23574.1	23644.9	23689.5	23664.9	23544.8
30°	23149.2	23132.3	23138.5	23224.7	23197.0
32.5°	22382.7	22285.7	22321.1	22224.1	22124.1
35°	21223.6	21165.1	21171.3	21239.0	21202.0
37.5°	19782.8	19693.5	19789.0	19838.2	19755.1
40°	18226.6	18359.0	18251.2	18286.6	18357.5
42.5°	16879.7	16999.8	16944.4	16993.7	16936.7
45°	15728.4	15769.9	15805.3	15823.8	15856.1
47.5°	14658.6	14703.2	14730.9	14750.9	14752.5
50°	13651.9	13634.9	13675.0	13571.8	13730.4
52.5°	12480.5	12369.7	12365.0	12331.2	12509.7
55°	11338.3	11309.1	11302.9	11273.7	11390.7
57.5°	10373.2	10376.3	10391.7	10400.9	10499.4
60°	9498.9	9417.3	9489.7	9468.1	9528.1
62.5°	8646.1	8549.2	8584.6	8583.0	8663.1
65°	7824.2	7688.7	7725.6	7739.5	7830.3
67.5°	7109.9	7037.6	6996.0	7054.5	7120.7
70°	6441.9	6392.6	6360.3	6398.8	6452.7
72.5°	5837.0	5767.7	5769.2	5761.5	5857.0
75°	5265.9	5227.4	5193.5	5205.8	5261.3
77.5°	4654.8	4704.0	4637.9	4662.5	4687.1
80°	4109.9	4165.3	4122.2	4117.6	4174.5
82.5°	3678.9	3683.5	3682.0	3655.8	3674.3
85°	3289.4	3289.4	3275.6	3261.7	3334.1
87.5°	2930.8	2855.4	2840.0	2850.7	2893.8
90°	2033.4	1954.9	1790.2	1933.3	2065.7
92.5°	1674.7	1704.0	1660.9	1660.9	1679.4
95°	1491.6	1550.1	1553.1	1507.0	1497.7
97.5°	1371.5	1408.4	1394.6	1370.0	1383.8
100°	1225.3	1237.6	1225.3	1216.0	1220.6
102.5°	1092.9	1091.3	1085.2	1074.4	1103.7
105°	843.5	852.8	845.1	837.4	854.3
107.5°	591.1	583.4	571.1	572.6	580.3
110°	358.7	360.2	338.6	344.8	366.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	163.2	172.4	178.6	169.3	173.9
115°	67.7	72.3	73.9	70.8	72.3
117.5°	35.4	35.4	33.9	35.4	38.5
120°	32.3	33.9	30.8	32.3	35.4
122.5°	35.4	36.9	35.4	36.9	38.5
125°	40.0	40.0	38.5	40.0	41.6
127.5°	43.1	43.1	41.6	43.1	44.6
130°	44.6	46.2	46.2	46.2	46.2
132.5°	47.7	49.3	47.7	49.3	49.3
135°	50.8	50.8	50.8	50.8	52.3
137.5°	53.9	53.9	53.9	53.9	53.9
140°	55.4	55.4	55.4	55.4	55.4
142.5°	57.0	55.4	55.4	55.4	53.9
145°	55.4	53.9	53.9	53.9	52.3
147.5°	50.8	50.8	49.3	50.8	49.3
150°	46.2	44.6	44.6	44.6	44.6
152.5°	40.0	40.0	38.5	40.0	40.0
155°	36.9	36.9	35.4	35.4	36.9
157.5°	36.9	36.9	35.4	35.4	36.9
160°	36.9	36.9	35.4	35.4	35.4
162.5°	36.9	36.9	35.4	35.4	35.4
165°	36.9	35.4	35.4	35.4	35.4
167.5°	36.9	35.4	35.4	35.4	35.4
170°	36.9	35.4	35.4	35.4	35.4
172.5°	35.4	35.4	35.4	35.4	35.4
175°	33.9	35.4	33.9	35.4	36.9
177.5°	33.9	33.9	33.9	35.4	36.9
180°	35.4	35.4	35.4	35.4	35.4

(END OF REPORT)