

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: P295511

Luminaire Tested: **BMK-30-MCL-UNV-L850-CD-U**

Issue Date: 3/3/2020

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: P295511
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-251-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-30-MCL-UNV-L850-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH MEDIUM CLEAR LENS
Light Source: (528) 80 CRI 5000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30556.0 lumens
Efficiency: N/A
Efficacy: 151.9 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.37 / 1.37
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

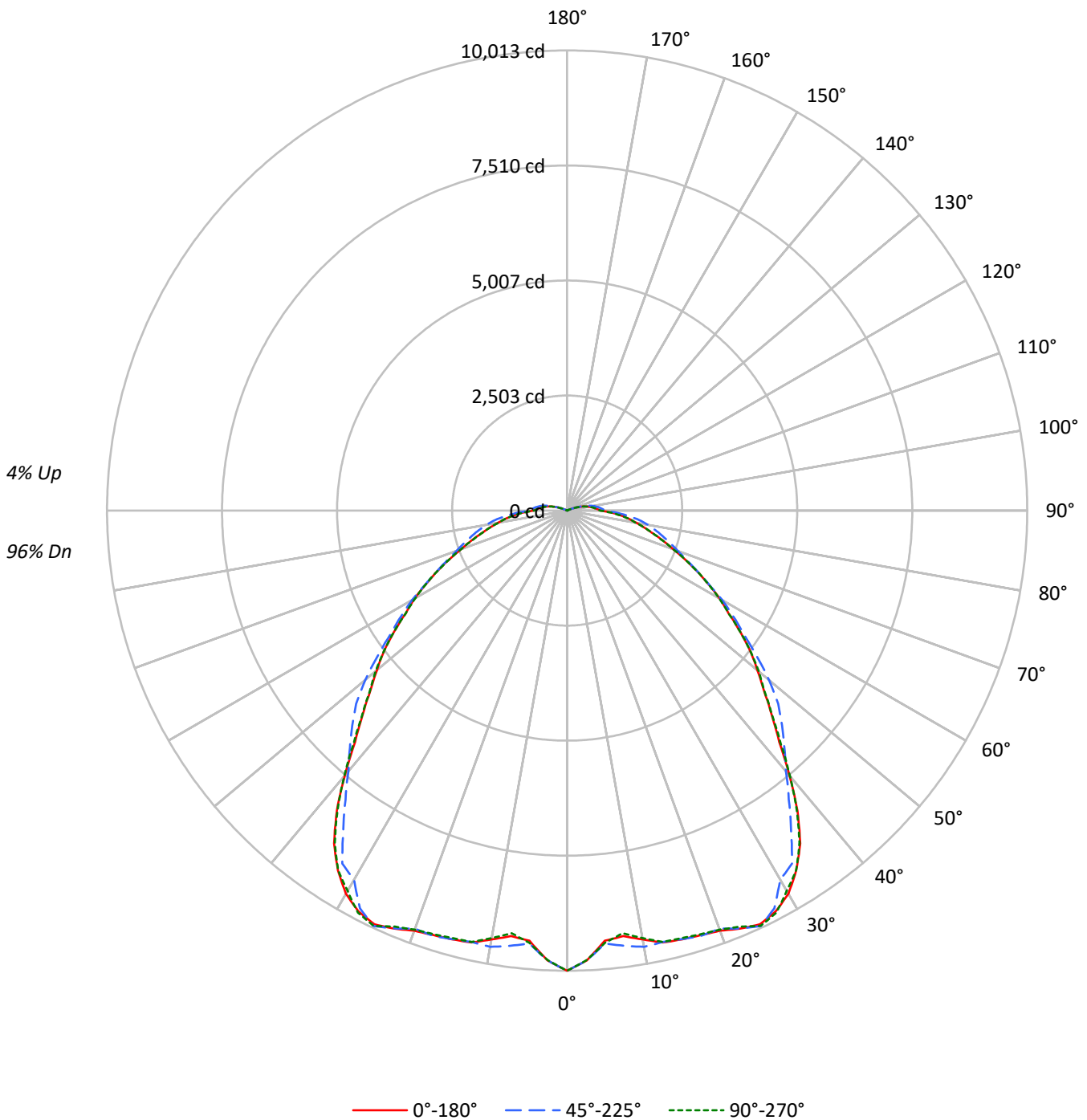
Input Watts (W): 201.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	91	88	90	87	84	86	83	81	79				
2	97	89	82	76	94	87	80	75	82	77	72	79	74	70	75	71	68	66				
3	89	78	70	63	86	76	69	62	73	66	61	69	64	59	66	62	58	55				
4	81	69	61	54	79	68	60	53	65	58	52	62	56	51	59	54	50	48				
5	75	62	53	46	73	61	52	46	58	51	45	56	49	44	54	48	44	41				
6	69	56	47	41	67	55	46	40	53	45	40	51	44	39	49	43	38	36				
7	64	51	42	36	62	50	42	36	48	41	35	46	40	35	45	39	34	32				
8	60	46	38	32	58	46	37	32	44	37	31	42	36	31	41	35	31	29				
9	56	43	34	29	54	42	34	29	40	33	28	39	33	28	38	32	28	26				
10	52	39	31	26	51	39	31	26	37	30	26	36	30	25	35	29	25	23				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	77191	77191	77191
5°	71964	72424	72292
10°	72642	73900	72425
15°	74689	74660	74489
20°	76470	76104	76287
25°	80038	80374	80315
30°	80181	77222	79579
35°	76810	73766	76554
40°	68890	67747	69003
45°	61308	64387	61487
50°	56774	60210	57096
55°	52747	53872	52789
60°	49012	49764	48808
65°	45265	45389	45229
70°	41625	43414	41771
75°	39852	44371	39978
80°	40330	47369	39972
85°	43235	49932	43052



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	909.5	3.0
10°-20°	2741.8	9.0
20°-30°	4530.6	14.8
30°-40°	5392.3	17.6
40°-50°	5029.1	16.5
50°-60°	4190.9	13.7
60°-70°	3135.6	10.3
70°-80°	2177.0	7.1
80°-90°	1319.5	4.3
90°-100°	706.0	2.3
100°-110°	367.0	1.2
110°-120°	55.7	0.2
120°-130°	0.9	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	8181.9	26.8
0°-40°	13574.2	44.4
0°-60°	22794.3	74.6
0°-90°	29426.3	96.3
90°-120°	1128.8	3.7
90°-150°	1129.7	3.7
90°-180°	1130.0	3.7
0°-180°	30556.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10013	10013	10013	10013	10013	
5°	9396	9466	9457	9443	9439	903
15°	9658	9724	9654	9702	9632	2736
25°	9933	9928	9975	9947	9968	4545
35°	8844	8699	8493	8704	8814	5461
45°	6295	6518	6611	6529	6313	4897
55°	4594	4666	4692	4670	4597	4114
65°	3117	3152	3125	3151	3114	3089
75°	1934	2044	2153	2048	1940	2071
85°	1156	1189	1335	1189	1151	1020
90°	730	780	818	773	719	422
95°	600	640	716	636	607	471
105°	337	343	384	340	340	353
115°	32	37	48	38	33	54
125°	0	0	0	0	0	1
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	10013.0	10013.0	10013.0	10013.0	10013.0
2.5°	9796.1	9804.7	9794.8	9769.1	9787.5
5°	9396.5	9466.4	9456.6	9443.1	9439.4
7.5°	9338.9	9444.3	9549.7	9434.5	9275.2
10°	9475.0	9580.4	9639.2	9571.8	9446.8
12.5°	9628.2	9623.3	9617.1	9612.2	9612.2
15°	9657.6	9723.8	9653.9	9701.7	9631.8
17.5°	9684.5	9732.3	9701.7	9725.0	9663.7
20°	9726.2	9775.2	9679.6	9752.0	9702.9
22.5°	9845.1	9880.6	9841.4	9877.0	9799.8
25°	9933.3	9928.4	9975.0	9946.8	9967.7
27.5°	9831.6	9801.0	9759.3	9749.5	9861.0
30°	9628.2	9463.9	9272.8	9428.4	9555.9
32.5°	9281.3	9289.9	9107.3	9300.9	9276.4
35°	8843.8	8699.2	8493.3	8704.1	8814.4
37.5°	8231.0	8121.9	7924.6	8120.7	8206.5
40°	7531.2	7549.6	7406.2	7545.9	7543.5
42.5°	6830.2	7010.3	6995.6	6980.9	6882.9
45°	6294.6	6517.6	6610.8	6528.7	6313.0
47.5°	5811.7	6123.0	6226.0	6125.5	5825.2
50°	5407.3	5613.2	5734.5	5611.9	5437.9
52.5°	5021.2	5093.5	5194.0	5115.6	5027.3
55°	4593.5	4665.8	4691.5	4669.5	4597.2
57.5°	4168.2	4282.2	4287.1	4273.6	4165.8
60°	3836.1	3882.6	3894.9	3898.6	3820.1
62.5°	3454.9	3518.6	3474.5	3518.6	3463.5
65°	3116.7	3152.2	3125.2	3151.0	3114.2
67.5°	2768.6	2866.6	2823.7	2861.7	2777.2
70°	2452.4	2577.4	2557.8	2579.8	2461.0
72.5°	2192.6	2302.9	2348.2	2294.3	2181.5
75°	1934.0	2044.3	2153.3	2047.9	1940.1
77.5°	1729.3	1812.6	1967.1	1820.0	1726.8
80°	1523.4	1600.6	1789.3	1594.5	1509.9
82.5°	1356.7	1392.3	1582.2	1399.6	1349.4
85°	1155.7	1188.8	1334.7	1188.8	1150.8
87.5°	949.8	974.3	1071.2	986.6	936.3
90°	730.4	779.5	817.5	773.3	719.4
92.5°	667.9	703.5	769.7	697.4	663.0
95°	600.5	639.8	715.7	636.1	606.7
97.5°	550.3	569.9	644.7	568.7	546.6
100°	487.8	507.4	583.4	501.3	480.4
102.5°	415.5	426.5	496.4	430.2	416.7
105°	337.0	343.2	383.6	339.5	339.5
107.5°	251.2	247.6	261.0	243.9	250.0
110°	161.8	150.7	163.0	150.7	164.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	88.2	79.7	95.6	80.9	87.0
115°	31.9	36.8	47.8	38.0	33.1
117.5°	8.6	14.7	17.2	14.7	8.6
120°	7.4	8.6	7.4	8.6	7.4
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)