

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: P295507

Luminaire Tested: **BMK-30-MCL-UNV-L740-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: P295507
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-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH MEDIUM CLEAR LENS
Light Source: (528) 70 CRI 4000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32654.0 lumens
Efficiency: N/A
Efficacy: 162.4 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

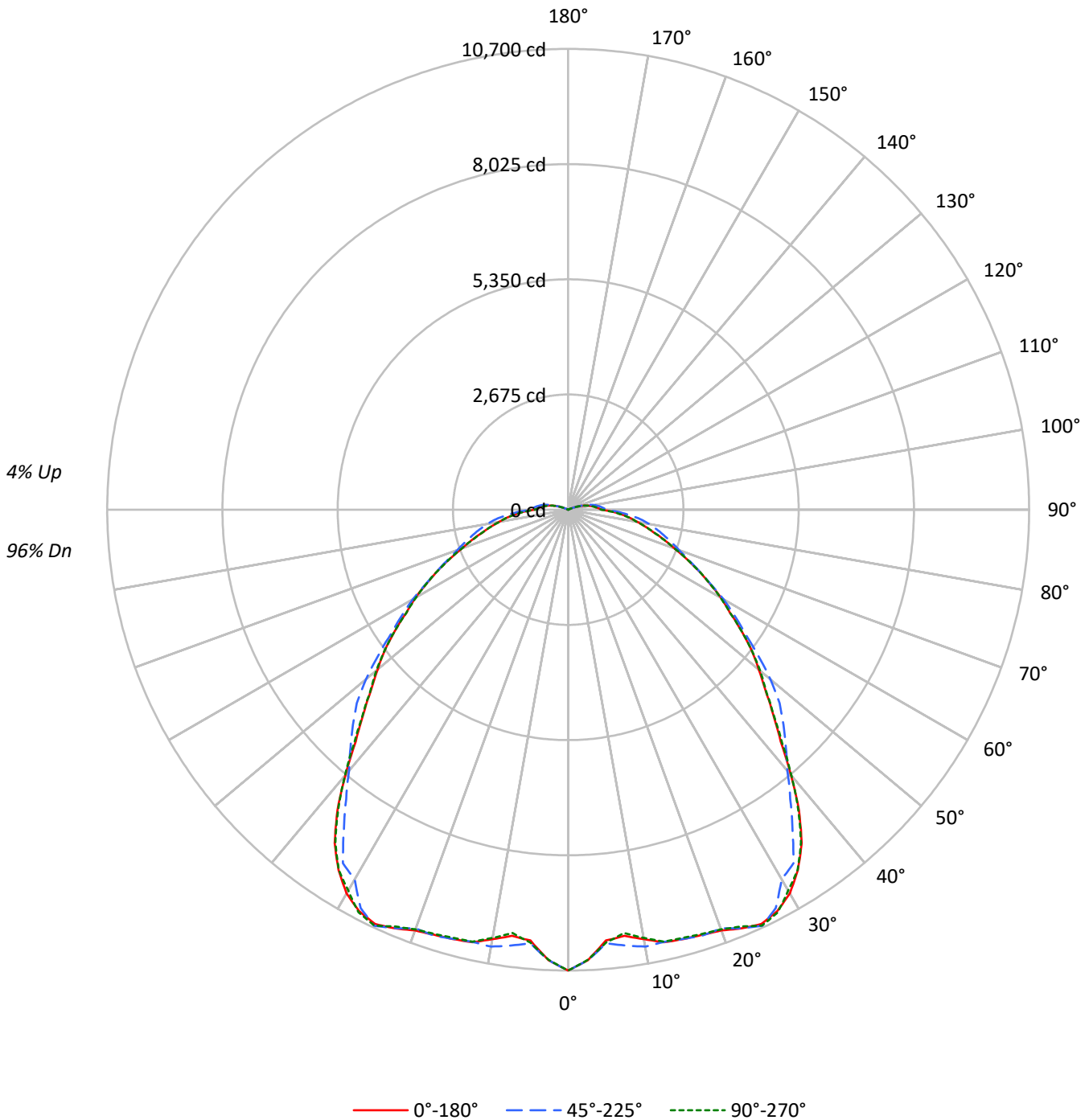
Input Watts (W): 201.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	82491	82491	82491
5°	76905	77397	77256
10°	77629	78974	77398
15°	79817	79787	79604
20°	81720	81330	81525
25°	85534	85893	85829
30°	85686	82523	85043
35°	82083	78830	81811
40°	73620	72398	73740
45°	65517	68808	65708
50°	60672	64344	61016
55°	56368	57572	56413
60°	52378	53180	52159
65°	48372	48506	48334
70°	44484	46395	44638
75°	42589	47419	42723
80°	43099	50623	42718
85°	46206	53359	46007



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	971.9	3.0
10°-20°	2930.0	9.0
20°-30°	4841.7	14.8
30°-40°	5762.6	17.6
40°-50°	5374.4	16.5
50°-60°	4478.6	13.7
60°-70°	3350.8	10.3
70°-80°	2326.5	7.1
80°-90°	1410.1	4.3
90°-100°	754.5	2.3
100°-110°	392.2	1.2
110°-120°	59.6	0.2
120°-130°	1.0	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°	8743.7	26.8
0°-40°	14506.3	44.4
0°-60°	24359.3	74.6
0°-90°	31446.7	96.3
90°-120°	1206.2	3.7
90°-150°	1207.2	3.7
90°-180°	1207.0	3.7
0°-180°	32654.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10700	10700	10700	10700	10700	
5°	10042	10116	10106	10092	10088	965
15°	10321	10391	10317	10368	10293	2924
25°	10615	10610	10660	10630	10652	4857
35°	9451	9296	9076	9302	9420	5836
45°	6727	6965	7065	6977	6746	5233
55°	4909	4986	5014	4990	4913	4397
65°	3331	3369	3340	3367	3328	3301
75°	2067	2185	2301	2189	2073	2213
85°	1235	1270	1426	1270	1230	1091
90°	781	833	874	826	769	451
95°	642	684	765	680	648	503
105°	360	367	410	363	363	377
115°	34	39	51	41	35	58
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°	10700.5	10700.5	10700.5	10700.5	10700.5
2.5°	10468.7	10477.8	10467.4	10439.9	10459.5
5°	10041.7	10116.4	10105.9	10091.5	10087.5
7.5°	9980.2	10092.8	10205.4	10082.3	9912.0
10°	10125.5	10238.2	10301.0	10229.0	10095.4
12.5°	10289.2	10284.0	10277.5	10272.2	10272.2
15°	10320.7	10391.4	10316.8	10367.8	10293.2
17.5°	10349.5	10400.6	10367.8	10392.7	10327.2
20°	10394.0	10446.4	10344.3	10421.5	10369.1
22.5°	10521.1	10559.1	10517.1	10555.1	10472.6
25°	10615.4	10610.1	10659.9	10629.8	10652.0
27.5°	10506.7	10473.9	10429.4	10418.9	10538.1
30°	10289.2	10113.7	9909.4	10075.8	10212.0
32.5°	9918.6	9927.8	9732.6	9939.5	9913.4
35°	9451.0	9296.5	9076.4	9301.7	9419.6
37.5°	8796.2	8679.6	8468.7	8678.3	8770.0
40°	8048.3	8067.9	7914.7	8064.0	8061.4
42.5°	7299.1	7491.7	7475.9	7460.2	7355.4
45°	6726.8	6965.1	7064.7	6976.9	6746.4
47.5°	6210.7	6543.4	6653.4	6546.0	6225.2
50°	5778.5	5998.6	6128.2	5997.3	5811.3
52.5°	5366.0	5443.2	5550.6	5466.8	5372.5
55°	4908.9	4986.1	5013.7	4990.1	4912.8
57.5°	4454.4	4576.2	4581.4	4567.0	4451.8
60°	4099.5	4149.2	4162.3	4166.3	4082.4
62.5°	3692.1	3760.2	3713.1	3760.2	3701.3
65°	3330.6	3368.6	3339.8	3367.3	3328.0
67.5°	2958.7	3063.5	3017.6	3058.2	2967.9
70°	2620.8	2754.4	2733.4	2757.0	2629.9
72.5°	2343.1	2461.0	2509.4	2451.8	2331.3
75°	2066.8	2184.6	2301.2	2188.6	2073.3
77.5°	1848.0	1937.1	2102.1	1945.0	1845.4
80°	1628.0	1710.5	1912.2	1704.0	1613.6
82.5°	1449.9	1487.9	1690.9	1495.7	1442.0
85°	1235.1	1270.4	1426.3	1270.4	1229.8
87.5°	1015.0	1041.2	1144.7	1054.3	1000.6
90°	780.6	833.0	873.6	826.4	768.8
92.5°	713.8	751.8	822.5	745.2	708.6
95°	641.8	683.7	764.9	679.8	648.3
97.5°	588.1	609.0	688.9	607.7	584.1
100°	521.3	542.2	623.4	535.7	513.4
102.5°	444.0	455.8	530.4	459.7	445.3
105°	360.2	366.7	409.9	362.8	362.8
107.5°	268.5	264.6	279.0	260.6	267.2
110°	172.9	161.1	174.2	161.1	175.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	94.3	85.1	102.2	86.4	93.0
115°	34.1	39.3	51.1	40.6	35.4
117.5°	9.2	15.7	18.3	15.7	9.2
120°	7.9	9.2	7.9	9.2	7.9
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)