

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: P295471

Luminaire Tested: **BMK-30-MFL-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: P295471
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-251-3)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-30-MFL-UNV-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH MEDIUM FROSTED 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: 31843.0 lumens
Efficiency: N/A
Efficacy: 158.3 lumens/watt
Spacing Criteria (0/90/45): 1.33 / 1.33 / 1.36
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

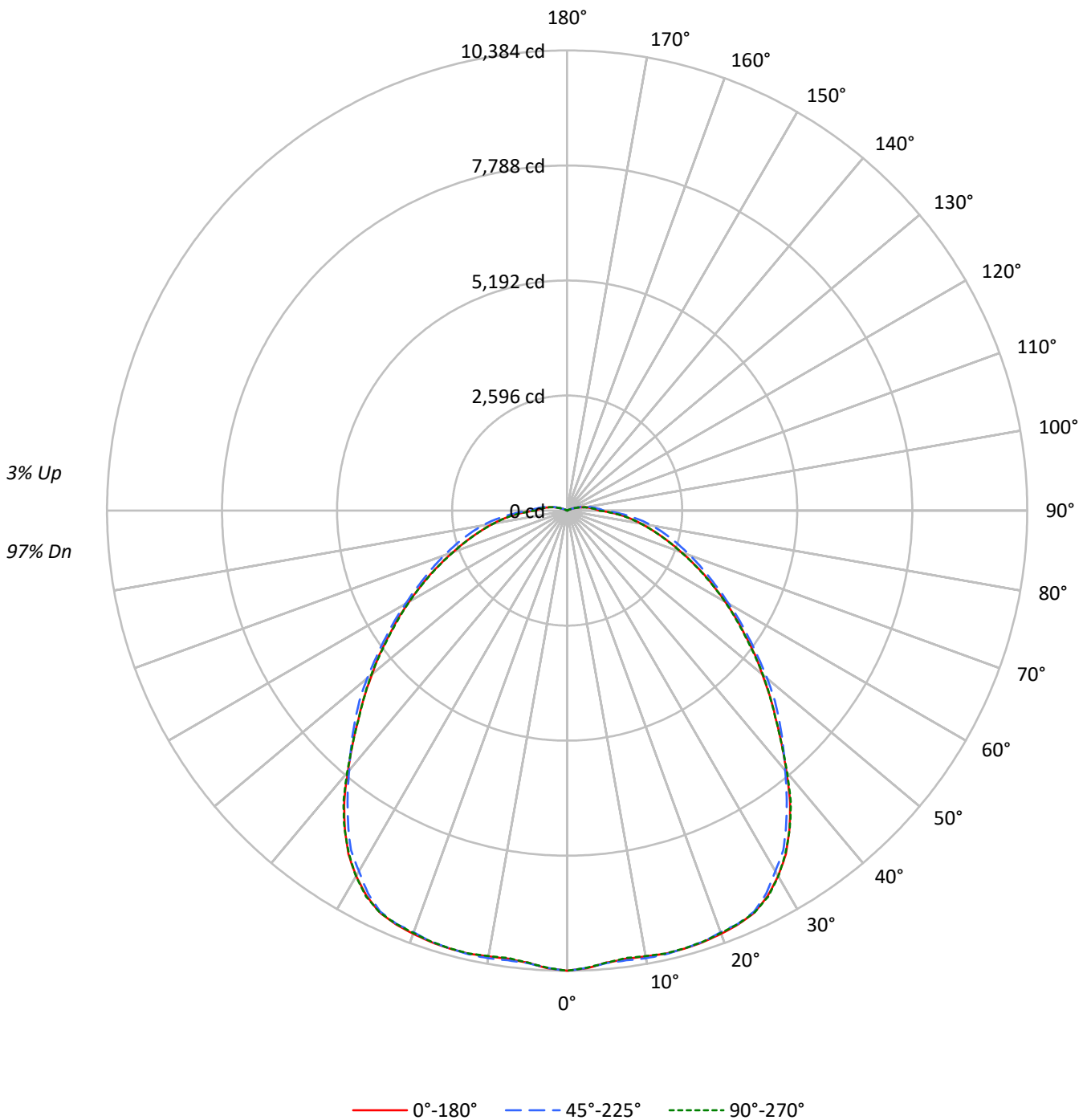
Input Watts (W): 201.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	97
1	107	102	97	93	104	99	95	91	94	91	88	90	87	84	86	83	81	79
2	97	89	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	64	59	66	62	58	55
4	81	69	60	53	79	67	59	53	64	57	52	62	56	51	59	54	49	47
5	75	62	53	46	72	60	52	45	58	50	45	56	49	44	53	48	43	41
6	69	56	47	40	67	54	46	40	52	45	39	50	44	39	48	43	38	36
7	64	50	42	35	62	49	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	31	44	36	31	42	36	31	41	35	30	28
9	56	42	34	28	54	42	34	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	80055	80055	80055
5°	78426	78476	78416
10°	78307	78639	78267
15°	79144	79083	79094
20°	79893	79625	79759
25°	80630	80451	80609
30°	79294	78246	79370
35°	75966	74861	76080
40°	70400	70016	70652
45°	64907	66108	64831
50°	60320	61863	60609
55°	56242	57432	56090
60°	52626	53815	52576
65°	49441	51213	49156
70°	46385	49992	46341
75°	44882	49990	44828
80°	44854	51171	44748
85°	46262	52199	46116



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	977.7	3.1
10°-20°	2895.4	9.1
20°-30°	4579.5	14.4
30°-40°	5416.2	17.0
40°-50°	5206.3	16.3
50°-60°	4448.9	14.0
60°-70°	3451.9	10.8
70°-80°	2435.0	7.6
80°-90°	1409.7	4.4
90°-100°	662.0	2.1
100°-110°	304.8	1.0
110°-120°	54.9	0.2
120°-130°	0.8	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°	8452.6	26.5
0°-40°	13868.8	43.6
0°-60°	23523.9	73.9
0°-90°	30820.5	96.8
90°-120°	1021.7	3.2
90°-150°	1022.5	3.2
90°-180°	1023.0	3.2
0°-180°	31843.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10384	10384	10384	10384	10384	
5°	10240	10243	10247	10232	10239	977
15°	10234	10244	10226	10232	10227	2896
25°	10007	9982	9985	9981	10004	4592
35°	8747	8689	8619	8699	8760	5444
45°	6664	6755	6788	6739	6656	5160
55°	4898	4966	5002	4971	4885	4400
65°	3404	3479	3526	3472	3385	3376
75°	2178	2286	2426	2294	2176	2317
85°	1237	1282	1395	1282	1233	1098
90°	724	793	830	791	721	419
95°	566	597	650	595	569	434
105°	277	281	302	282	275	294
115°	33	42	55	42	33	48
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°	10384.5	10384.5	10384.5	10384.5	10384.5
2.5°	10334.7	10324.2	10328.1	10316.3	10324.2
5°	10240.3	10242.9	10246.8	10232.4	10239.0
7.5°	10199.6	10212.7	10236.3	10206.2	10182.6
10°	10214.0	10236.3	10257.3	10224.5	10208.8
12.5°	10241.6	10248.1	10256.0	10240.3	10239.0
15°	10233.7	10244.2	10225.8	10232.4	10227.2
17.5°	10208.8	10212.7	10199.6	10206.2	10198.3
20°	10161.6	10155.0	10127.5	10148.5	10144.5
22.5°	10105.2	10096.0	10088.1	10100.0	10093.4
25°	10006.8	9981.9	9984.6	9980.6	10004.2
27.5°	9802.3	9761.6	9734.1	9753.8	9821.9
30°	9521.6	9466.6	9395.8	9462.6	9530.8
32.5°	9188.6	9146.6	9082.4	9142.7	9171.5
35°	8746.6	8688.9	8619.4	8699.4	8759.8
37.5°	8265.4	8230.0	8139.5	8226.0	8290.3
40°	7696.3	7704.1	7654.3	7722.5	7723.8
42.5°	7166.5	7220.2	7216.3	7216.3	7166.5
45°	6664.2	6754.7	6787.5	6739.0	6656.4
47.5°	6207.9	6298.4	6354.8	6290.5	6204.0
50°	5745.0	5840.7	5891.9	5828.9	5772.5
52.5°	5335.8	5379.1	5429.0	5373.9	5313.6
55°	4897.9	4966.0	5001.5	4971.3	4884.7
57.5°	4516.3	4564.8	4606.7	4576.6	4490.0
60°	4118.9	4172.7	4212.0	4188.4	4115.0
62.5°	3749.1	3827.8	3856.7	3818.6	3739.9
65°	3404.2	3479.0	3526.2	3472.4	3384.6
67.5°	3060.7	3159.0	3233.8	3169.5	3050.2
70°	2732.8	2862.7	2945.3	2846.9	2730.2
72.5°	2454.8	2571.5	2677.8	2567.6	2444.3
75°	2178.1	2285.7	2426.0	2293.5	2175.5
77.5°	1927.7	2030.0	2183.4	2026.0	1915.9
80°	1694.3	1775.6	1932.9	1770.3	1690.3
82.5°	1466.1	1526.4	1679.8	1523.8	1460.8
85°	1236.6	1282.5	1395.3	1282.5	1232.7
87.5°	967.8	1042.5	1106.8	1039.9	953.3
90°	723.9	793.4	830.1	790.7	721.2
92.5°	645.2	680.6	739.6	680.6	645.2
95°	566.5	596.7	650.4	595.3	569.1
97.5°	491.8	515.4	566.5	512.7	494.4
100°	423.6	435.4	482.6	438.0	420.9
102.5°	350.1	358.0	392.1	355.4	350.1
105°	276.7	280.6	301.6	281.9	275.4
107.5°	201.9	205.9	216.4	204.6	200.6
110°	133.8	136.4	149.5	136.4	135.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	77.4	83.9	97.0	83.9	77.4
115°	32.8	42.0	55.1	42.0	32.8
117.5°	10.5	17.0	21.0	17.0	9.2
120°	6.6	7.9	6.6	7.9	6.6
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)