

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: P295506

Luminaire Tested: **BMK-30-MCL-UNV-L735-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: P295506
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-L735-CD-U
Description: BENCHMARK Highbay LED Fixture
WITH MEDIUM CLEAR LENS
Light Source: (528) 70 CRI 3500K LEDs
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32229.0 lumens
Efficiency: N/A
Efficacy: 160.3 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

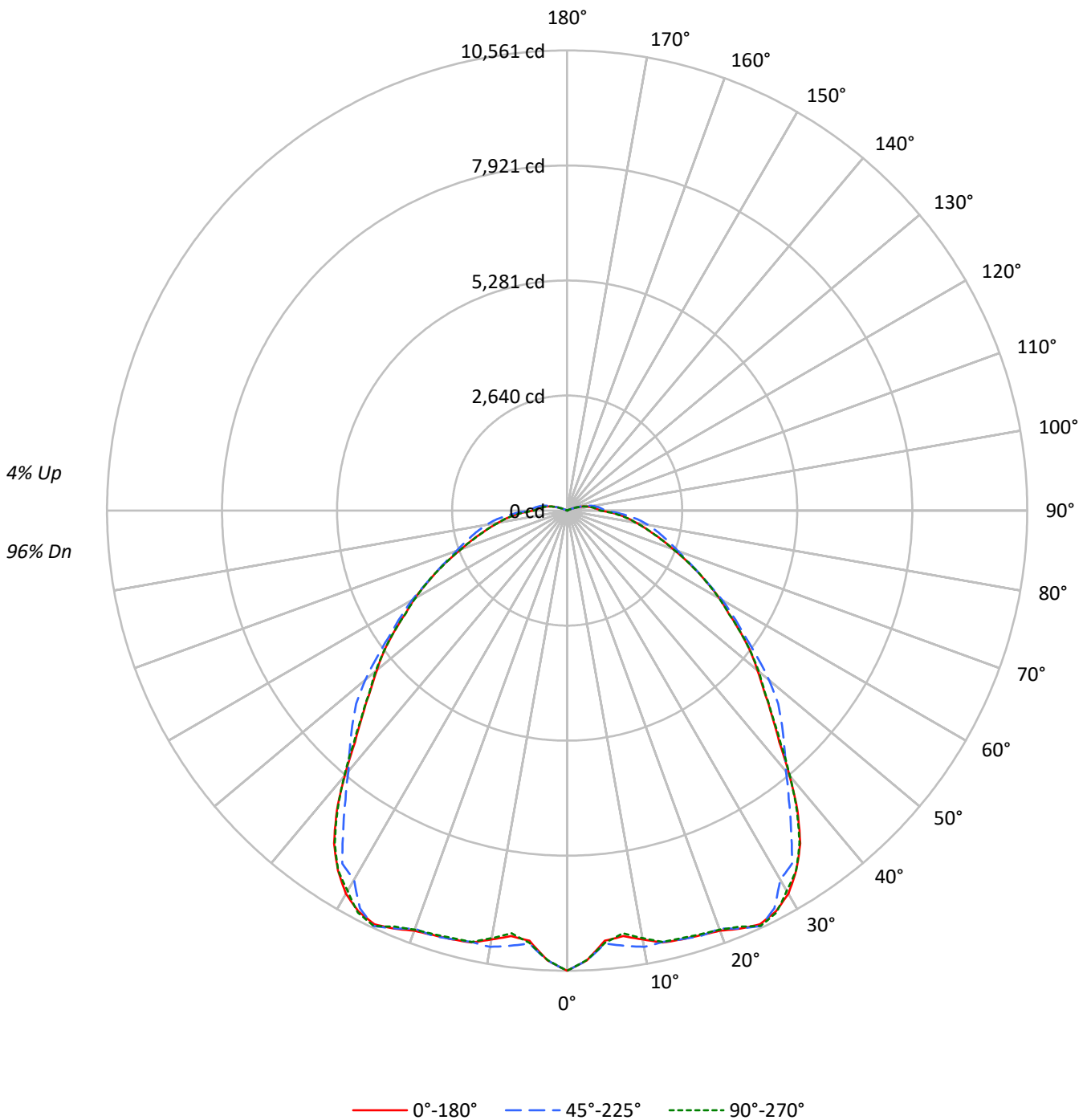
Input Watts (W): 201.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	81417	81417	81417
5°	75904	76390	76251
10°	76618	77947	76391
15°	78778	78748	78568
20°	80657	80271	80464
25°	84421	84775	84712
30°	84571	81450	83936
35°	81015	77804	80746
40°	72662	71456	72781
45°	64664	67912	64853
50°	59882	63507	60221
55°	55635	56822	55679
60°	51696	52489	51481
65°	47743	47874	47705
70°	43905	45791	44058
75°	42034	46800	42166
80°	42538	49963	42162
85°	45603	52663	45409



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	959.3	3.0
10°-20°	2891.9	9.0
20°-30°	4778.7	14.8
30°-40°	5687.5	17.6
40°-50°	5304.5	16.5
50°-60°	4420.3	13.7
60°-70°	3307.2	10.3
70°-80°	2296.2	7.1
80°-90°	1391.7	4.3
90°-100°	744.7	2.3
100°-110°	387.1	1.2
110°-120°	58.8	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°	8629.9	26.8
0°-40°	14317.5	44.4
0°-60°	24042.3	74.6
0°-90°	31037.5	96.3
90°-120°	1190.5	3.7
90°-150°	1191.5	3.7
90°-180°	1191.0	3.7
0°-180°	32229.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10561	10561	10561	10561	10561	
5°	9911	9985	9974	9960	9956	953
15°	10186	10256	10182	10233	10159	2886
25°	10477	10472	10521	10491	10513	4794
35°	9328	9176	8958	9181	9297	5760
45°	6639	6874	6973	6886	6659	5165
55°	4845	4921	4948	4925	4849	4339
65°	3287	3325	3296	3324	3285	3259
75°	2040	2156	2271	2160	2046	2184
85°	1219	1254	1408	1254	1214	1076
90°	770	822	862	816	759	445
95°	633	675	755	671	640	497
105°	356	362	405	358	358	372
115°	34	39	50	40	35	57
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°	10561.2	10561.2	10561.2	10561.2	10561.2
2.5°	10332.4	10341.5	10331.1	10304.0	10323.4
5°	9911.0	9984.7	9974.4	9960.1	9956.3
7.5°	9850.3	9961.4	10072.6	9951.1	9783.0
10°	9993.7	10104.9	10167.0	10095.9	9964.0
12.5°	10155.3	10150.2	10143.7	10138.5	10138.5
15°	10186.4	10256.2	10182.5	10232.9	10159.2
17.5°	10214.8	10265.2	10232.9	10257.5	10192.8
20°	10258.7	10310.5	10209.6	10285.9	10234.2
22.5°	10384.1	10421.6	10380.3	10417.7	10336.3
25°	10477.2	10472.0	10521.2	10491.4	10513.4
27.5°	10369.9	10337.6	10293.6	10283.3	10400.9
30°	10155.3	9982.1	9780.5	9944.6	10079.1
32.5°	9789.5	9798.5	9605.9	9810.2	9784.3
35°	9328.0	9175.5	8958.3	9180.6	9297.0
37.5°	8681.7	8566.6	8358.5	8565.3	8655.8
40°	7943.5	7962.9	7811.7	7959.1	7956.5
42.5°	7204.1	7394.2	7378.6	7363.1	7259.7
45°	6639.2	6874.5	6972.7	6886.1	6658.6
47.5°	6129.9	6458.3	6566.8	6460.8	6144.1
50°	5703.3	5920.5	6048.5	5919.2	5735.6
52.5°	5296.1	5372.4	5478.4	5395.7	5302.6
55°	4845.0	4921.3	4948.4	4925.1	4848.9
57.5°	4396.4	4516.6	4521.8	4507.6	4393.8
60°	4046.1	4095.2	4108.2	4112.0	4029.3
62.5°	3644.1	3711.3	3664.8	3711.3	3653.1
65°	3287.3	3324.8	3296.3	3323.5	3284.7
67.5°	2920.2	3023.6	2978.3	3018.4	2929.2
70°	2586.7	2718.5	2697.8	2721.1	2595.7
72.5°	2312.6	2429.0	2476.8	2419.9	2301.0
75°	2039.9	2156.2	2271.2	2160.1	2046.3
77.5°	1824.0	1911.9	2074.8	1919.6	1821.4
80°	1606.8	1688.2	1887.3	1681.8	1592.6
82.5°	1431.0	1468.5	1668.9	1476.2	1423.2
85°	1219.0	1253.9	1407.7	1253.9	1213.8
87.5°	1001.8	1027.7	1129.8	1040.6	987.6
90°	770.4	822.1	862.2	815.7	758.8
92.5°	704.5	742.0	811.8	735.5	699.3
95°	633.4	674.8	754.9	670.9	639.9
97.5°	580.4	601.1	680.0	599.8	576.5
100°	514.5	535.2	615.3	528.7	506.7
102.5°	438.2	449.9	523.5	453.7	439.5
105°	355.5	362.0	404.6	358.1	358.1
107.5°	265.0	261.1	275.3	257.2	263.7
110°	170.6	159.0	171.9	159.0	173.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	93.1	84.0	100.8	85.3	91.8
115°	33.6	38.8	50.4	40.1	34.9
117.5°	9.0	15.5	18.1	15.5	9.0
120°	7.8	9.0	7.8	9.0	7.8
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)