

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: P295470

Luminaire Tested: **BMK-30-MFL-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: P295470
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-L735-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH MEDIUM FROSTED 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: 31428.0 lumens
Efficiency: N/A
Efficacy: 156.3 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

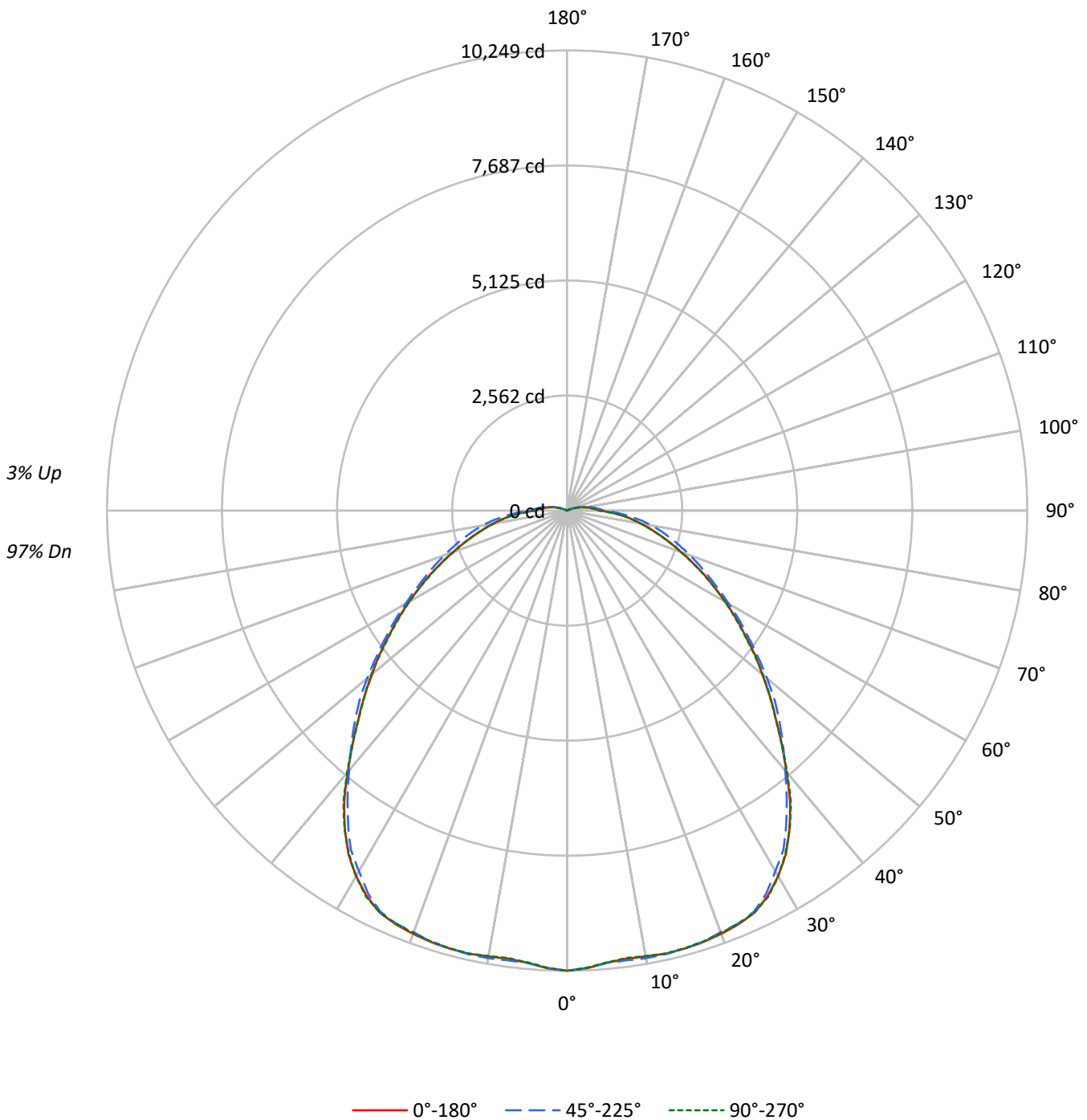
Input Watts (W): 201.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	79012	79012	79012
5°	77404	77453	77394
10°	77287	77614	77247
15°	78113	78053	78063
20°	78852	78587	78719
25°	79580	79402	79559
30°	78261	77226	78336
35°	74976	73885	75088
40°	69483	69103	69731
45°	64062	65246	63986
50°	59534	61056	59819
55°	55508	56683	55360
60°	51940	53114	51891
65°	48798	50545	48516
70°	45781	49340	45736
75°	44299	49339	44245
80°	44269	50503	44166
85°	45659	51518	45514



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	965.0	3.1
10°-20°	2857.7	9.1
20°-30°	4519.8	14.4
30°-40°	5345.6	17.0
40°-50°	5138.4	16.3
50°-60°	4390.9	14.0
60°-70°	3406.9	10.8
70°-80°	2403.2	7.6
80°-90°	1391.3	4.4
90°-100°	653.3	2.1
100°-110°	300.8	1.0
110°-120°	54.2	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°	8342.5	26.5
0°-40°	13688.0	43.6
0°-60°	23217.3	73.9
0°-90°	30418.8	96.8
90°-120°	1008.4	3.2
90°-150°	1009.2	3.2
90°-180°	1009.0	3.2
0°-180°	31428.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10249	10249	10249	10249	10249	
5°	10107	10109	10113	10099	10106	964
15°	10100	10111	10093	10099	10094	2858
25°	9876	9852	9854	9850	9874	4532
35°	8633	8576	8507	8586	8646	5373
45°	6577	6667	6699	6651	6570	5093
55°	4834	4901	4936	4906	4821	4343
65°	3360	3434	3480	3427	3340	3332
75°	2150	2256	2394	2264	2147	2286
85°	1220	1266	1377	1266	1217	1084
90°	714	783	819	780	712	414
95°	559	589	642	588	562	428
105°	273	277	298	278	272	290
115°	32	41	54	41	32	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°	10249.2	10249.2	10249.2	10249.2	10249.2
2.5°	10200.0	10189.6	10193.5	10181.9	10189.6
5°	10106.8	10109.4	10113.3	10099.0	10105.5
7.5°	10066.7	10079.6	10102.9	10073.2	10049.9
10°	10080.9	10102.9	10123.6	10091.3	10075.7
12.5°	10108.1	10114.6	10122.3	10106.8	10105.5
15°	10100.3	10110.7	10092.6	10099.0	10093.9
17.5°	10075.7	10079.6	10066.7	10073.2	10065.4
20°	10029.2	10022.7	9995.5	10016.2	10012.3
22.5°	9973.5	9964.4	9956.7	9968.3	9961.9
25°	9876.4	9851.8	9854.4	9850.5	9873.8
27.5°	9674.5	9634.4	9607.2	9626.6	9693.9
30°	9397.6	9343.2	9273.3	9339.3	9406.6
32.5°	9068.8	9027.4	8964.0	9023.5	9052.0
35°	8632.7	8575.7	8507.1	8586.1	8645.6
37.5°	8157.7	8122.7	8033.4	8118.8	8182.3
40°	7596.0	7603.7	7554.5	7621.8	7623.1
42.5°	7073.1	7126.1	7122.3	7122.3	7073.1
45°	6577.4	6666.7	6699.0	6651.2	6569.6
47.5°	6127.0	6216.3	6271.9	6208.5	6123.1
50°	5670.1	5764.6	5815.1	5752.9	5697.3
52.5°	5266.3	5309.0	5358.2	5303.8	5244.3
55°	4834.0	4901.3	4936.3	4906.5	4821.1
57.5°	4457.4	4505.3	4546.7	4516.9	4431.5
60°	4065.2	4118.3	4157.1	4133.8	4061.4
62.5°	3700.3	3777.9	3806.4	3768.9	3691.2
65°	3359.9	3433.6	3480.2	3427.2	3340.5
67.5°	3020.8	3117.9	3191.6	3128.2	3010.4
70°	2697.2	2825.4	2906.9	2809.8	2694.6
72.5°	2422.8	2538.0	2642.9	2534.1	2412.5
75°	2149.8	2255.9	2394.4	2263.6	2147.2
77.5°	1902.5	2003.5	2154.9	1999.6	1890.9
80°	1672.2	1752.4	1907.7	1747.2	1668.3
82.5°	1447.0	1506.5	1657.9	1503.9	1441.8
85°	1220.5	1265.8	1377.1	1265.8	1216.6
87.5°	955.2	1028.9	1092.3	1026.3	940.9
90°	714.4	783.0	819.3	780.4	711.8
92.5°	636.8	671.7	730.0	671.7	636.8
95°	559.1	588.9	641.9	587.6	561.7
97.5°	485.3	508.6	559.1	506.1	487.9
100°	418.0	429.7	476.3	432.3	415.5
102.5°	345.6	353.3	387.0	350.7	345.6
105°	273.1	277.0	297.7	278.3	271.8
107.5°	199.3	203.2	213.6	201.9	198.0
110°	132.0	134.6	147.5	134.6	133.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	76.4	82.8	95.8	82.8	76.4
115°	32.4	41.4	54.4	41.4	32.4
117.5°	10.4	16.8	20.7	16.8	9.1
120°	6.5	7.8	6.5	7.8	6.5
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)