

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: P294536

Luminaire Tested: **BMK-24-NFL-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: P294536
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-103-7)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-24-NFL-UNV-L735-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH NARROW 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: 25721.0 lumens
Efficiency: N/A
Efficacy: 165.4 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.11
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

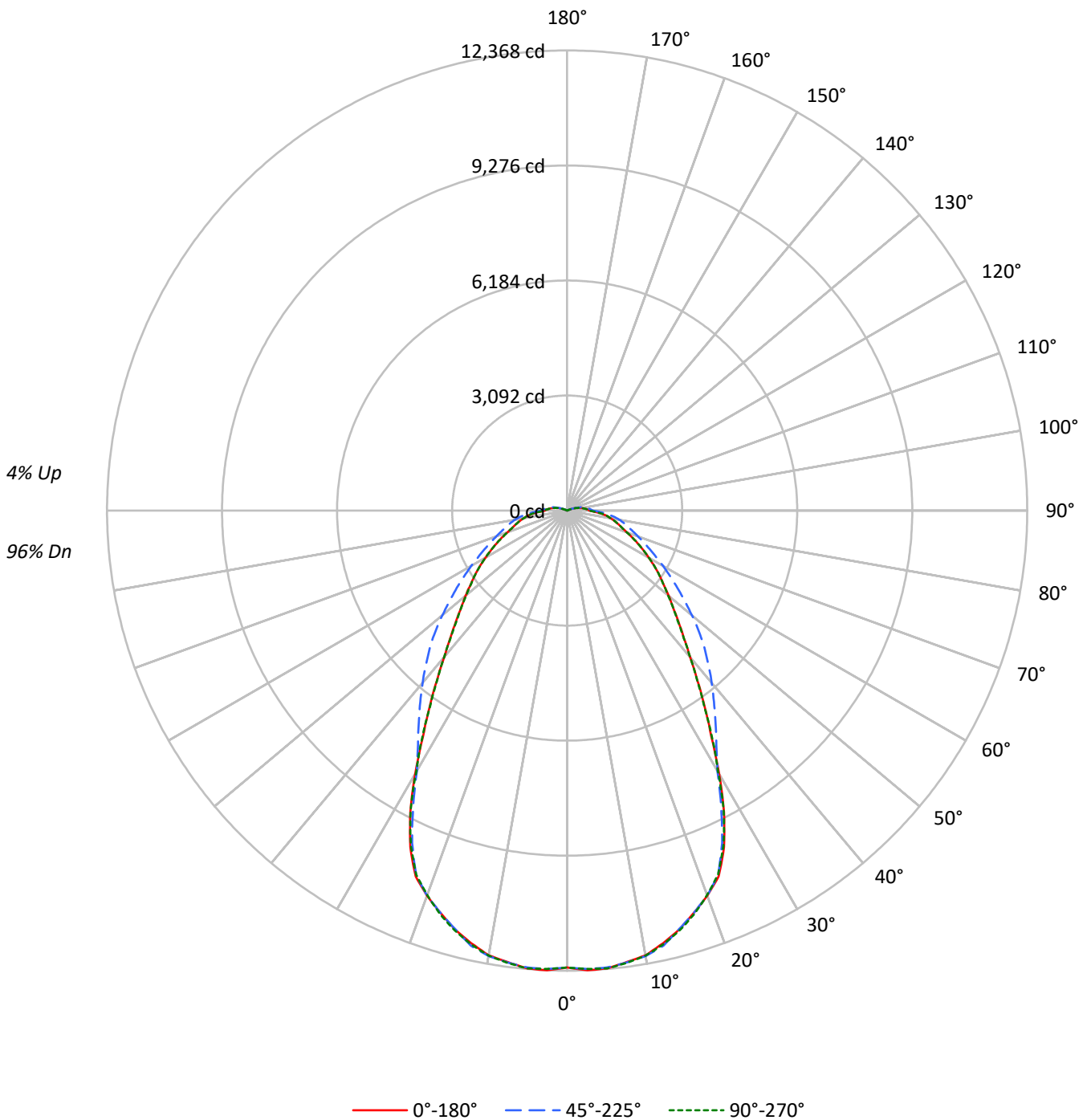
Input Watts (W): 155.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	95	105	100	96	93	95	92	89	91	88	86	87	84	82	80
2	99	91	84	78	96	88	82	77	84	79	75	80	76	72	77	73	70	68
3	91	80	73	66	88	79	71	66	75	69	64	72	67	62	69	65	61	59
4	84	72	64	57	81	71	63	57	68	61	56	65	59	55	62	58	53	51
5	77	65	57	50	75	64	56	50	61	55	49	59	53	48	57	52	47	45
6	72	59	51	45	70	58	50	45	56	49	44	54	48	43	52	47	43	41
7	67	54	46	40	65	53	46	40	52	45	40	50	44	39	48	43	38	37
8	63	50	42	37	61	49	42	36	48	41	36	46	40	35	45	39	35	33
9	59	46	39	33	58	46	38	33	44	38	33	43	37	32	42	36	32	30
10	56	43	36	31	54	42	35	30	41	35	30	40	34	30	39	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	94658	94658	94658
5°	94583	94418	94583
10°	93050	93221	93098
15°	90115	90012	90369
20°	86616	86545	86435
25°	80400	79415	80073
30°	68038	67212	67596
35°	55993	60391	55830
40°	46981	55312	47033
45°	41229	50833	40916
50°	37435	45934	37178
55°	34733	41527	34717
60°	32356	38031	32436
65°	30531	35450	30358
70°	28984	34330	28865
75°	29359	35014	29374
80°	31488	37846	31506
85°	34463	41021	34882



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1169.4	4.5
10°-20°	3275.9	12.7
20°-30°	4478.4	17.4
30°-40°	4206.4	16.4
40°-50°	3626.8	14.1
50°-60°	2975.8	11.6
60°-70°	2292.9	8.9
70°-80°	1680.0	6.5
80°-90°	1076.6	4.2
90°-100°	582.1	2.3
100°-110°	301.5	1.2
110°-120°	54.5	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°	8923.7	34.7
0°-40°	13130.1	51.0
0°-60°	19732.6	76.7
0°-90°	24782.1	96.3
90°-120°	938.1	3.6
90°-150°	938.9	3.7
90°-180°	939.0	3.7
0°-180°	25721.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12279	12279	12279	12279	12279	
5°	12350	12342	12328	12323	12350	###
15°	11652	11626	11639	11632	11685	3277
25°	9978	9868	9856	9830	9938	4514
35°	6447	6678	6953	6664	6428	4057
45°	4233	4647	5219	4633	4201	3291
55°	3025	3306	3616	3304	3023	2710
65°	2102	2337	2441	2332	2090	2086
75°	1425	1603	1699	1598	1426	1513
85°	921	988	1096	984	932	806
90°	598	645	689	652	597	344
95°	506	520	587	520	506	391
105°	273	277	323	278	274	285
115°	31	40	52	41	31	47
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°	12278.8	12278.8	12278.8	12278.8	12278.8
2.5°	12368.2	12345.1	12332.5	12318.6	12330.4
5°	12350.0	12341.6	12328.4	12322.8	12350.0
7.5°	12241.0	12233.4	12250.8	12221.5	12262.7
10°	12137.0	12111.8	12159.3	12060.9	12143.3
12.5°	11908.6	11926.1	11976.4	11906.5	11938.6
15°	11652.3	11625.7	11639.0	11632.0	11685.1
17.5°	11332.4	11315.7	11331.0	11312.9	11368.7
20°	11016.7	10995.8	11007.7	10997.2	10993.7
22.5°	10642.4	10575.3	10602.6	10527.8	10593.5
25°	9978.2	9868.5	9856.0	9830.1	9937.7
27.5°	9132.4	9023.5	8962.0	8988.5	9119.2
30°	8170.0	8163.7	8070.8	8131.6	8116.9
32.5°	7214.6	7398.3	7458.3	7394.8	7257.2
35°	6447.0	6678.2	6953.4	6663.5	6428.2
37.5°	5750.0	6078.3	6479.9	6048.2	5731.9
40°	5136.1	5535.6	6046.8	5508.4	5141.7
42.5°	4640.2	5062.1	5614.5	5055.1	4634.7
45°	4233.1	4647.2	5219.2	4632.6	4200.9
47.5°	3860.1	4277.1	4803.0	4269.4	3859.4
50°	3565.4	3906.9	4374.8	3906.2	3540.9
52.5°	3270.7	3593.3	3972.6	3599.6	3258.1
55°	3024.8	3306.3	3616.4	3303.5	3023.4
57.5°	2778.3	3047.2	3279.0	3043.7	2781.8
60°	2532.4	2793.6	2976.6	2786.0	2538.7
62.5°	2307.5	2562.5	2686.8	2549.2	2313.1
65°	2102.2	2336.9	2440.9	2332.0	2090.3
67.5°	1898.3	2129.5	2223.7	2131.6	1892.0
70°	1707.6	1944.4	2022.6	1941.6	1700.6
72.5°	1551.2	1774.0	1851.5	1767.7	1551.2
75°	1424.8	1602.9	1699.2	1598.0	1425.5
77.5°	1302.5	1447.8	1563.7	1443.6	1312.3
80°	1189.4	1301.8	1429.6	1289.3	1190.1
82.5°	1070.7	1144.0	1271.1	1138.4	1076.3
85°	921.2	987.6	1096.5	984.1	932.4
87.5°	746.6	822.7	884.2	822.7	756.4
90°	597.8	644.6	689.3	652.3	597.1
92.5°	566.4	581.8	639.7	583.9	567.8
95°	506.3	520.3	587.4	519.6	506.3
97.5°	449.8	463.0	530.8	461.0	447.0
100°	389.7	401.6	466.5	405.1	387.6
102.5°	335.2	344.3	399.5	345.0	334.5
105°	273.1	276.6	322.7	278.0	274.5
107.5°	202.5	206.7	230.5	209.5	206.0
110°	135.5	139.0	155.0	141.8	139.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	76.8	81.0	101.3	81.7	75.4
115°	30.7	40.5	52.4	41.2	31.4
117.5°	8.4	15.4	18.9	15.4	9.1
120°	7.0	7.7	7.0	7.7	6.3
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)