

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: P294537

Luminaire Tested: **BMK-24-NFL-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: P294537
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-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH NARROW 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: 26060.0 lumens
Efficiency: N/A
Efficacy: 167.6 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

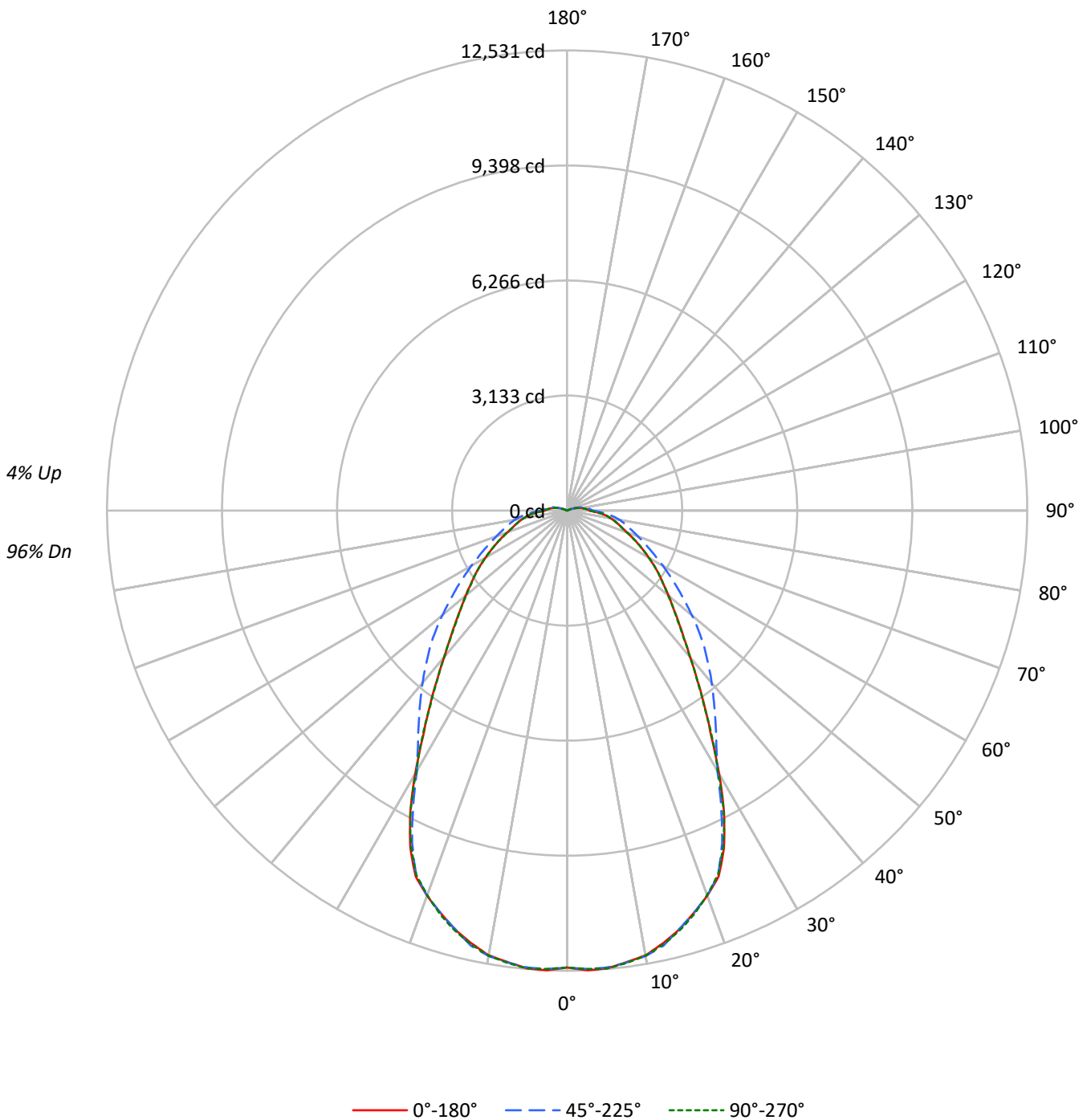
Input Watts (W): 155.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	95906	95906	95906
5°	95830	95662	95830
10°	94276	94450	94325
15°	91303	91199	91560
20°	87758	87685	87575
25°	81459	80462	81129
30°	68935	68098	68487
35°	56731	61187	56565
40°	47601	56041	47653
45°	41773	51504	41455
50°	37929	46539	37668
55°	35192	42073	35175
60°	32782	38533	32864
65°	30934	35918	30759
70°	29366	34784	29245
75°	29745	35475	29759
80°	31903	38347	31922
85°	34915	41563	35342



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1184.8	4.5
10°-20°	3319.1	12.7
20°-30°	4537.4	17.4
30°-40°	4261.8	16.4
40°-50°	3674.6	14.1
50°-60°	3015.0	11.6
60°-70°	2323.1	8.9
70°-80°	1702.1	6.5
80°-90°	1090.8	4.2
90°-100°	589.8	2.3
100°-110°	305.4	1.2
110°-120°	55.2	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°	9041.3	34.7
0°-40°	13303.1	51.0
0°-60°	19992.7	76.7
0°-90°	25108.7	96.3
90°-120°	950.5	3.6
90°-150°	951.3	3.7
90°-180°	951.0	3.6
0°-180°	26060.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12441	12441	12441	12441	12441	
5°	12513	12504	12491	12485	12513	###
15°	11806	11779	11792	11785	11839	3320
25°	10110	9999	9986	9960	10069	4573
35°	6532	6766	7045	6751	6513	4110
45°	4289	4708	5288	4694	4256	3335
55°	3065	3350	3664	3347	3063	2746
65°	2130	2368	2473	2363	2118	2114
75°	1444	1624	1722	1619	1444	1533
85°	933	1001	1111	997	945	816
90°	606	653	698	661	605	348
95°	513	527	595	526	513	396
105°	277	280	327	282	278	289
115°	31	41	53	42	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°	12440.6	12440.6	12440.6	12440.6	12440.6
2.5°	12531.2	12507.8	12495.1	12480.9	12493.0
5°	12512.8	12504.3	12490.8	12485.2	12512.8
7.5°	12402.4	12394.6	12412.3	12382.6	12424.3
10°	12296.9	12271.5	12319.6	12219.8	12303.3
12.5°	12065.6	12083.2	12134.2	12063.4	12096.0
15°	11805.9	11779.0	11792.4	11785.3	11839.1
17.5°	11481.8	11464.8	11480.4	11462.0	11518.6
20°	11161.9	11140.7	11152.7	11142.1	11138.6
22.5°	10782.7	10714.7	10742.3	10666.6	10733.1
25°	10109.7	9998.6	9985.9	9959.7	10068.7
27.5°	9252.8	9142.4	9080.1	9107.0	9239.3
30°	8277.7	8271.3	8177.2	8238.8	8223.9
32.5°	7309.7	7495.8	7556.6	7492.2	7352.8
35°	6532.0	6766.2	7045.0	6751.4	6512.9
37.5°	5825.8	6158.4	6565.3	6128.0	5807.4
40°	5203.8	5608.6	6126.5	5581.0	5209.5
42.5°	4701.4	5128.8	5688.5	5121.7	4695.7
45°	4288.9	4708.5	5288.0	4693.6	4256.3
47.5°	3911.0	4333.4	4866.3	4325.7	3910.3
50°	3612.4	3958.4	4432.5	3957.7	3587.6
52.5°	3313.8	3640.7	4024.9	3647.1	3301.0
55°	3064.7	3349.9	3664.0	3347.0	3063.3
57.5°	2814.9	3087.3	3322.3	3083.8	2818.4
60°	2565.8	2830.5	3015.9	2822.7	2572.2
62.5°	2338.0	2596.2	2722.2	2582.8	2343.6
65°	2129.9	2367.7	2473.1	2362.7	2117.9
67.5°	1923.3	2157.5	2253.0	2159.6	1916.9
70°	1730.1	1970.0	2049.3	1967.2	1723.0
72.5°	1571.6	1797.3	1875.9	1791.0	1571.6
75°	1443.5	1624.0	1721.6	1619.0	1444.2
77.5°	1319.7	1466.9	1584.4	1462.6	1329.6
80°	1205.1	1319.0	1448.5	1306.3	1205.8
82.5°	1084.8	1159.1	1287.9	1153.4	1090.4
85°	933.3	1000.6	1111.0	997.0	944.7
87.5°	756.4	833.6	895.8	833.6	766.3
90°	605.7	653.1	698.4	660.9	605.0
92.5°	573.9	589.4	648.2	591.6	575.3
95°	513.0	527.2	595.1	526.5	513.0
97.5°	455.7	469.1	537.8	467.0	452.9
100°	394.8	406.9	472.7	410.4	392.7
102.5°	339.7	348.9	404.8	349.6	338.9
105°	276.7	280.2	326.9	281.6	278.1
107.5°	205.2	209.5	233.5	212.3	208.7
110°	137.3	140.8	157.1	143.6	140.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	77.8	82.1	102.6	82.8	76.4
115°	31.1	41.0	53.1	41.7	31.8
117.5°	8.5	15.6	19.1	15.6	9.2
120°	7.1	7.8	7.1	7.8	6.4
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)