

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: P294524

Luminaire Tested: **BMK-15-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: P294524
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-15-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: 16189.0 lumens
Efficiency: N/A
Efficacy: 172.6 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

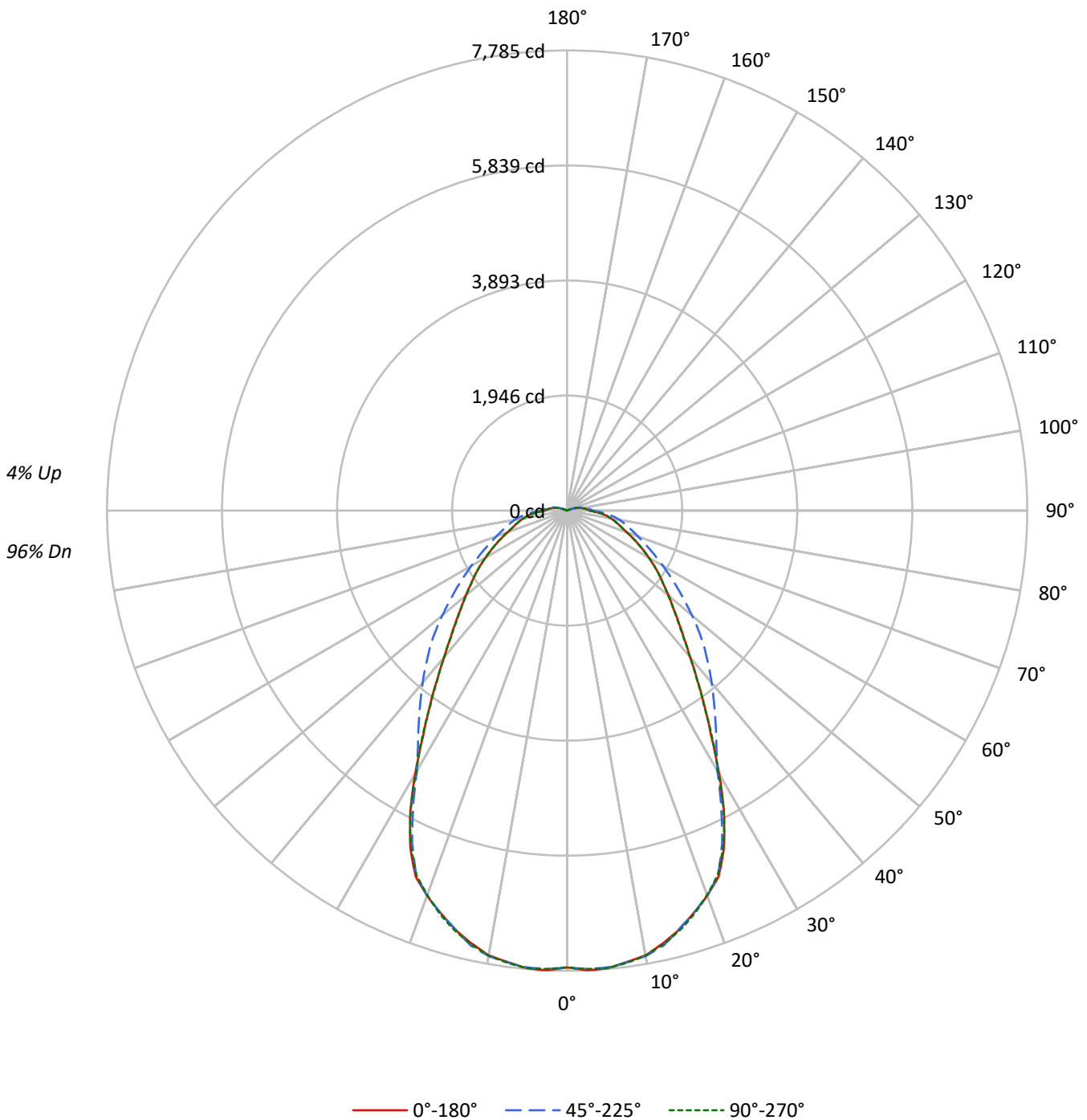
Input Watts (W): 93.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	59579	59579	59579
5°	59532	59427	59532
10°	58566	58674	58597
15°	56719	56655	56879
20°	54517	54472	54403
25°	50605	49984	50399
30°	42824	42303	42546
35°	35243	38011	35139
40°	29570	34814	29603
45°	25950	31995	25753
50°	23562	28912	23400
55°	21861	26137	21852
60°	20365	23937	20416
65°	19218	22314	19109
70°	18243	21607	18168
75°	18479	22038	18488
80°	19818	23821	19831
85°	21691	25817	21952



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	736.0	4.5
10°-20°	2061.9	12.7
20°-30°	2818.7	17.4
30°-40°	2647.5	16.4
40°-50°	2282.7	14.1
50°-60°	1873.0	11.6
60°-70°	1443.1	8.9
70°-80°	1057.4	6.5
80°-90°	677.6	4.2
90°-100°	366.4	2.3
100°-110°	189.8	1.2
110°-120°	34.3	0.2
120°-130°	0.5	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°	5616.6	34.7
0°-40°	8264.2	51.0
0°-60°	12419.9	76.7
0°-90°	15598.0	96.3
90°-120°	590.5	3.6
90°-150°	591.0	3.7
90°-180°	591.0	3.7
0°-180°	16189.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7728	7728	7728	7728	7728	
5°	7773	7768	7760	7756	7773	737
15°	7334	7317	7326	7321	7355	2062
25°	6280	6211	6203	6187	6255	2841
35°	4058	4203	4376	4194	4046	2553
45°	2664	2925	3285	2916	2644	2071
55°	1904	2081	2276	2079	1903	1706
65°	1323	1471	1536	1468	1316	1313
75°	897	1009	1070	1006	897	952
85°	580	622	690	619	587	507
90°	376	406	434	411	376	216
95°	319	328	370	327	319	246
105°	172	174	203	175	173	179
115°	19	26	33	26	20	30
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°	7728.4	7728.4	7728.4	7728.4	7728.4
2.5°	7784.6	7770.1	7762.2	7753.4	7760.9
5°	7773.2	7767.9	7759.6	7756.0	7773.2
7.5°	7704.6	7699.8	7710.8	7692.3	7718.2
10°	7639.1	7623.3	7653.2	7591.2	7643.1
12.5°	7495.4	7506.4	7538.0	7494.1	7514.3
15°	7334.0	7317.3	7325.7	7321.3	7354.7
17.5°	7132.7	7122.2	7131.8	7120.4	7155.6
20°	6934.0	6920.8	6928.3	6921.7	6919.5
22.5°	6698.4	6656.2	6673.3	6626.3	6667.6
25°	6280.4	6211.3	6203.4	6187.2	6254.9
27.5°	5748.0	5679.4	5640.8	5657.5	5739.7
30°	5142.3	5138.3	5079.8	5118.1	5108.9
32.5°	4540.9	4656.5	4694.3	4654.3	4567.7
35°	4057.8	4203.3	4376.5	4194.1	4045.9
37.5°	3619.1	3825.7	4078.5	3806.8	3607.7
40°	3232.7	3484.2	3805.9	3467.0	3236.2
42.5°	2920.6	3186.1	3533.8	3181.7	2917.1
45°	2664.3	2925.0	3285.0	2915.8	2644.1
47.5°	2429.6	2692.0	3023.0	2687.2	2429.1
50°	2244.1	2459.0	2753.6	2458.6	2228.7
52.5°	2058.6	2261.7	2500.4	2265.6	2050.7
55°	1903.8	2081.0	2276.2	2079.2	1903.0
57.5°	1748.7	1917.9	2063.9	1915.7	1750.9
60°	1593.9	1758.3	1873.5	1753.5	1597.9
62.5°	1452.4	1612.8	1691.1	1604.5	1455.9
65°	1323.2	1470.9	1536.4	1467.8	1315.7
67.5°	1194.8	1340.3	1399.6	1341.6	1190.8
70°	1074.8	1223.8	1273.0	1222.0	1070.4
72.5°	976.3	1116.5	1165.3	1112.6	976.3
75°	896.8	1008.8	1069.5	1005.8	897.2
77.5°	819.8	911.3	984.2	908.6	826.0
80°	748.6	819.4	899.8	811.5	749.1
82.5°	673.9	720.0	800.0	716.5	677.4
85°	579.8	621.6	690.1	619.4	586.8
87.5°	469.9	517.8	556.5	517.8	476.1
90°	376.3	405.7	433.9	410.6	375.8
92.5°	356.5	366.2	402.7	367.5	357.4
95°	318.7	327.5	369.7	327.1	318.7
97.5°	283.1	291.4	334.1	290.1	281.3
100°	245.3	252.8	293.6	255.0	244.0
102.5°	211.0	216.7	251.4	217.2	210.6
105°	171.9	174.1	203.1	175.0	172.8
107.5°	127.5	130.1	145.1	131.9	129.7
110°	85.3	87.5	97.6	89.2	87.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	48.4	51.0	63.7	51.4	47.5
115°	19.3	25.5	33.0	25.9	19.8
117.5°	5.3	9.7	11.9	9.7	5.7
120°	4.4	4.8	4.4	4.8	4.0
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)