

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: P294542

Luminaire Tested: **BMK-30-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: P294542
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-30-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: 31751.0 lumens
Efficiency: N/A
Efficacy: 157.9 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

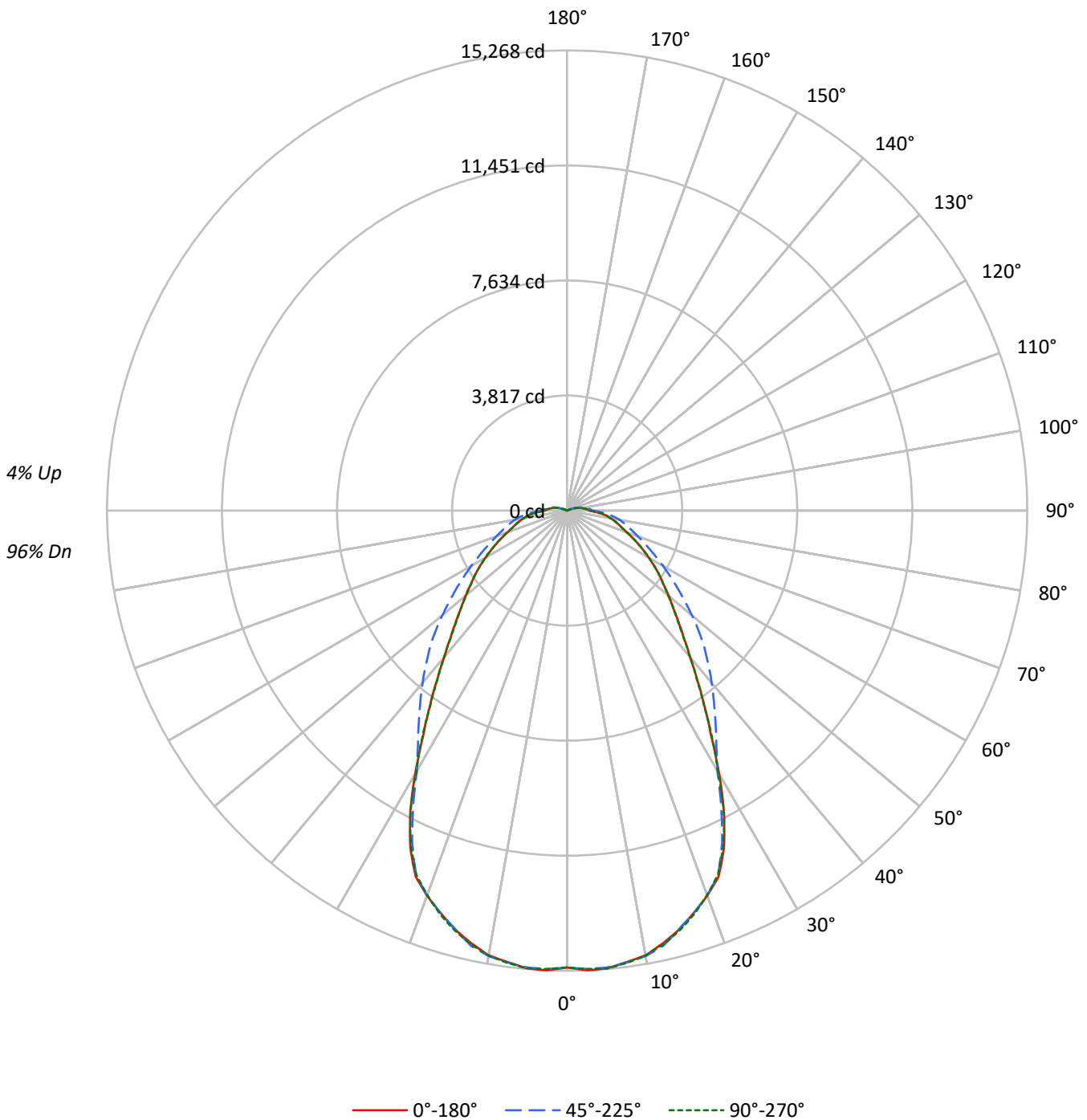
Input Watts (W): 201.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	99	99	99	96	
1	108	103	98	95	105	100	96	93	95	92	89	91	88	86	87	84	82	87	84	82	80	
2	99	91	84	78	96	88	82	77	84	79	75	80	76	72	77	73	70	77	73	70	68	
3	91	80	73	66	88	79	71	66	75	69	64	72	67	62	69	65	61	69	65	61	59	
4	84	72	64	57	81	71	63	57	68	61	56	65	59	55	62	58	53	62	58	53	51	
5	77	65	57	50	75	64	56	50	61	55	49	59	53	48	57	52	47	57	52	47	45	
6	72	59	51	45	70	58	50	45	56	49	44	54	48	43	52	47	43	52	47	43	41	
7	67	54	46	40	65	53	46	40	52	45	40	50	44	39	48	43	38	48	43	38	37	
8	63	50	42	37	61	49	42	36	48	41	36	46	40	35	45	39	35	45	39	35	33	
9	59	46	39	33	58	46	38	33	44	38	33	43	37	32	42	36	32	42	36	32	30	
10	56	43	36	31	54	42	35	30	41	35	30	40	34	30	39	34	30	39	34	30	28	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	116850	116850	116850
5°	116757	116553	116757
10°	114865	115076	114924
15°	111241	111115	111555
20°	106923	106835	106699
25°	99249	98033	98846
30°	83989	82970	83443
35°	69121	74549	68918
40°	57996	68280	58059
45°	50895	62751	50508
50°	46212	56703	45895
55°	42877	51262	42856
60°	39941	46948	40041
65°	37690	43762	37476
70°	35778	42379	35632
75°	36242	43223	36258
80°	38868	46720	38892
85°	42543	50639	43059



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1443.5	4.5
10°-20°	4043.9	12.7
20°-30°	5528.3	17.4
30°-40°	5192.5	16.4
40°-50°	4477.0	14.1
50°-60°	3673.4	11.6
60°-70°	2830.4	8.9
70°-80°	2073.9	6.5
80°-90°	1329.0	4.2
90°-100°	718.6	2.3
100°-110°	372.1	1.2
110°-120°	67.3	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°	11015.7	34.7
0°-40°	16208.3	51.0
0°-60°	24358.7	76.7
0°-90°	30591.9	96.3
90°-120°	1158.0	3.6
90°-150°	1159.1	3.7
90°-180°	1159.0	3.7
0°-180°	31751.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	15157	15157	15157	15157	15157	
5°	15245	15235	15219	15212	15245	###
15°	14384	14351	14368	14359	14425	4045
25°	12318	12182	12167	12135	12268	5572
35°	7958	8244	8584	8226	7935	5008
45°	5226	5737	6443	5719	5186	4063
55°	3734	4081	4464	4078	3732	3346
65°	2595	2885	3013	2879	2580	2575
75°	1759	1979	2098	1973	1760	1867
85°	1137	1219	1354	1215	1151	995
90°	738	796	851	805	737	424
95°	625	642	725	641	625	482
105°	337	341	398	343	339	352
115°	38	50	65	51	39	58
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°	15157.4	15157.4	15157.4	15157.4	15157.4
2.5°	15267.7	15239.3	15223.8	15206.5	15221.2
5°	15245.3	15235.0	15218.6	15211.7	15245.3
7.5°	15110.8	15101.3	15122.9	15086.7	15137.6
10°	14982.4	14951.3	15010.0	14888.4	14990.1
12.5°	14700.4	14722.0	14784.1	14697.9	14737.5
15°	14384.0	14351.3	14367.7	14359.0	14424.6
17.5°	13989.2	13968.5	13987.4	13965.0	14034.0
20°	13599.5	13573.6	13588.3	13575.3	13571.0
22.5°	13137.4	13054.6	13088.2	12996.0	13077.0
25°	12317.5	12182.1	12166.6	12134.7	12267.5
27.5°	11273.4	11138.9	11063.1	11095.8	11257.0
30°	10085.4	10077.6	9963.0	10038.0	10019.9
32.5°	8906.0	9132.7	9206.9	9128.4	8958.6
35°	7958.5	8243.8	8583.5	8225.7	7935.2
37.5°	7098.0	7503.3	7999.0	7466.2	7075.6
40°	6340.2	6833.4	7464.5	6799.7	6347.1
42.5°	5728.1	6248.8	6930.8	6240.2	5721.2
45°	5225.5	5736.7	6442.8	5718.6	5185.8
47.5°	4765.1	5279.8	5929.0	5270.3	4764.2
50°	4401.3	4822.8	5400.5	4822.0	4371.1
52.5°	4037.4	4435.7	4903.9	4443.5	4021.9
55°	3734.0	4081.4	4464.2	4077.9	3732.2
57.5°	3429.6	3761.5	4047.8	3757.2	3433.9
60°	3126.1	3448.6	3674.5	3439.1	3133.9
62.5°	2848.5	3163.2	3316.7	3146.8	2855.4
65°	2595.1	2884.7	3013.2	2878.7	2580.4
67.5°	2343.3	2628.7	2745.1	2631.3	2335.6
70°	2107.9	2400.2	2496.8	2396.8	2099.3
72.5°	1914.8	2189.8	2285.5	2182.1	1914.8
75°	1758.8	1978.6	2097.6	1972.6	1759.6
77.5°	1607.9	1787.2	1930.3	1782.1	1620.0
80°	1468.2	1607.0	1764.8	1591.5	1469.1
82.5°	1321.7	1412.2	1569.1	1405.3	1328.6
85°	1137.2	1219.1	1353.6	1214.8	1151.0
87.5°	921.6	1015.6	1091.5	1015.6	933.7
90°	738.0	795.8	850.9	805.2	737.1
92.5°	699.2	718.2	789.7	720.8	700.9
95°	625.1	642.3	725.1	641.4	625.1
97.5°	555.2	571.6	655.2	569.0	551.8
100°	481.1	495.7	575.9	500.0	478.5
102.5°	413.8	425.0	493.1	425.9	413.0
105°	337.1	341.4	398.3	343.1	338.8
107.5°	250.0	255.2	284.5	258.6	254.3
110°	167.3	171.6	191.4	175.0	171.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	94.8	100.0	125.0	100.9	93.1
115°	37.9	50.0	64.7	50.9	38.8
117.5°	10.3	19.0	23.3	19.0	11.2
120°	8.6	9.5	8.6	9.5	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)