

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: P294543

Luminaire Tested: **BMK-30-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: P294543  
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-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**

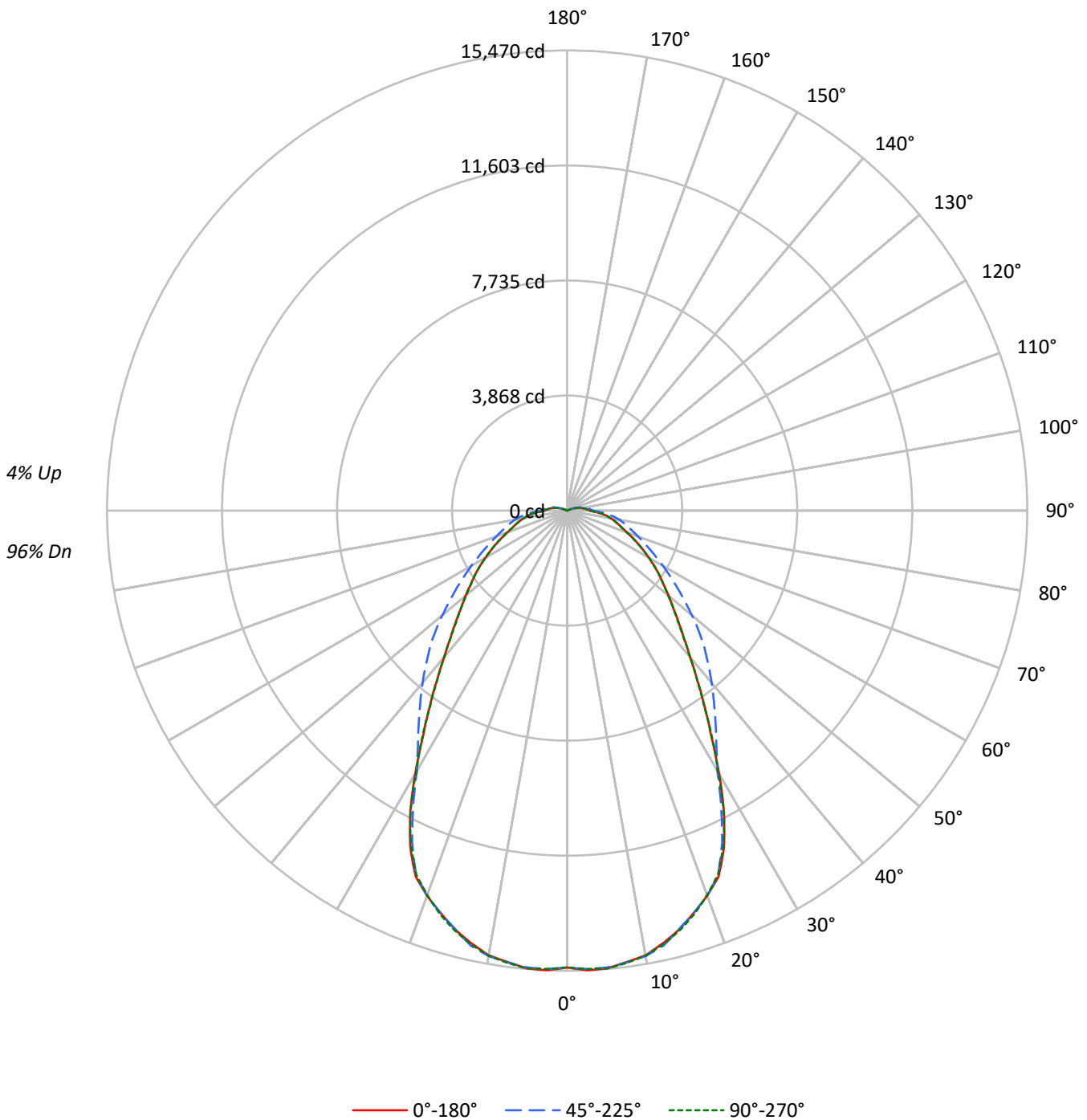
Lumens per Lamp: N/A  
Luminaire Lumens: 32171.0 lumens  
Efficiency: N/A  
Efficacy: 160.0 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.11  
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')  
CIE Type: Direct

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°	118395	118395	118395
5°	118302	118094	118302
10°	116384	116598	116444
15°	112713	112585	113031
20°	108337	108248	108111
25°	100561	99329	100153
30°	85100	84066	84547
35°	70034	75536	69830
40°	58763	69183	58827
45°	51568	63581	51176
50°	46823	57453	46502
55°	43443	51939	43424
60°	40470	47569	40571
65°	38188	44342	37972
70°	36252	42939	36104
75°	36720	43794	36739
80°	39385	47340	39406
85°	43104	51308	43628



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1462.6	4.5
10°-20°	4097.4	12.7
20°-30°	5601.4	17.4
30°-40°	5261.2	16.4
40°-50°	4536.3	14.1
50°-60°	3722.0	11.6
60°-70°	2867.8	8.9
70°-80°	2101.3	6.5
80°-90°	1346.6	4.2
90°-100°	728.1	2.3
100°-110°	377.1	1.2
110°-120°	68.2	0.2
120°-130°	1.1	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°	11161.4	34.7
0°-40°	16422.6	51.0
0°-60°	24680.9	76.7
0°-90°	30996.6	96.3
90°-120°	1173.3	3.6
90°-150°	1174.4	3.7
90°-180°	1174.0	3.6
0°-180°	32171.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	15358	15358	15358	15358	15358	
5°	15447	15436	15420	15413	15447	###
15°	14574	14541	14558	14549	14615	4099
25°	12480	12343	12328	12295	12430	5645
35°	8064	8353	8697	8334	8040	5074
45°	5295	5813	6528	5794	5254	4116
55°	3783	4135	4523	4132	3782	3390
65°	2629	2923	3053	2917	2614	2609
75°	1782	2005	2125	1999	1783	1892
85°	1152	1235	1372	1231	1166	1008
90°	748	806	862	816	747	430
95°	633	651	735	650	633	489
105°	342	346	404	348	343	356
115°	38	51	66	52	39	59
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°	15357.9	15357.9	15357.9	15357.9	15357.9
2.5°	15469.7	15440.9	15425.1	15407.7	15422.5
5°	15447.0	15436.5	15419.9	15412.9	15447.0
7.5°	15310.7	15301.1	15322.9	15286.3	15337.8
10°	15180.6	15149.1	15208.5	15085.3	15188.4
12.5°	14894.9	14916.7	14979.6	14892.3	14932.5
15°	14574.3	14541.1	14557.7	14549.0	14615.4
17.5°	14174.2	14153.3	14172.5	14149.8	14219.6
20°	13779.4	13753.2	13768.0	13754.9	13750.6
22.5°	13311.2	13227.3	13261.4	13167.9	13250.0
25°	12480.4	12343.3	12327.5	12295.2	12429.7
27.5°	11422.5	11286.3	11209.4	11242.6	11405.9
30°	10218.8	10210.9	10094.7	10170.7	10152.4
32.5°	9023.8	9253.5	9328.6	9249.1	9077.1
35°	8063.7	8352.9	8697.1	8334.5	8040.2
37.5°	7191.9	7602.5	8104.8	7564.9	7169.2
40°	6424.1	6923.8	7563.2	6889.7	6431.1
42.5°	5803.9	6331.5	7022.5	6322.8	5796.9
45°	5294.6	5812.6	6528.0	5794.3	5254.4
47.5°	4828.1	5349.6	6007.4	5340.0	4827.2
50°	4459.5	4886.6	5471.9	4885.8	4428.9
52.5°	4090.8	4494.4	4968.8	4502.3	4075.1
55°	3783.3	4135.4	4523.2	4131.9	3781.6
57.5°	3475.0	3811.3	4101.3	3806.9	3479.3
60°	3167.5	3494.2	3723.1	3484.6	3175.4
62.5°	2886.2	3205.1	3360.5	3188.5	2893.2
65°	2629.4	2922.9	3053.1	2916.8	2614.5
67.5°	2374.3	2663.5	2781.4	2666.1	2366.4
70°	2135.8	2432.0	2529.8	2428.5	2127.1
72.5°	1940.2	2218.8	2315.8	2211.0	1940.2
75°	1782.0	2004.8	2125.3	1998.7	1782.9
77.5°	1629.2	1810.9	1955.9	1805.6	1641.4
80°	1487.7	1628.3	1788.2	1612.6	1488.5
82.5°	1339.2	1430.9	1589.9	1423.9	1346.1
85°	1152.2	1235.2	1371.5	1230.8	1166.2
87.5°	933.8	1029.0	1105.9	1029.0	946.1
90°	747.8	806.3	862.2	815.9	746.9
92.5°	708.4	727.7	800.2	730.3	710.2
95°	633.3	650.8	734.7	649.9	633.3
97.5°	562.6	579.2	663.9	576.5	559.1
100°	487.4	502.3	583.5	506.7	484.8
102.5°	419.3	430.7	499.7	431.5	418.4
105°	341.6	345.9	403.6	347.7	343.3
107.5°	253.3	258.6	288.3	262.1	257.7
110°	169.5	173.8	193.9	177.3	173.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	96.1	101.3	126.7	102.2	94.3
115°	38.4	50.7	65.5	51.5	39.3
117.5°	10.5	19.2	23.6	19.2	11.4
120°	8.7	9.6	8.7	9.6	7.9
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)