

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: P294579

Luminaire Tested: **BMK-30-NCL-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: P294579  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1903-198-7)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: BMK-30-NCL-UNV-L740-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH NARROW CLEAR LENS  
Light Source: (528) 70 CRI 4000K LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

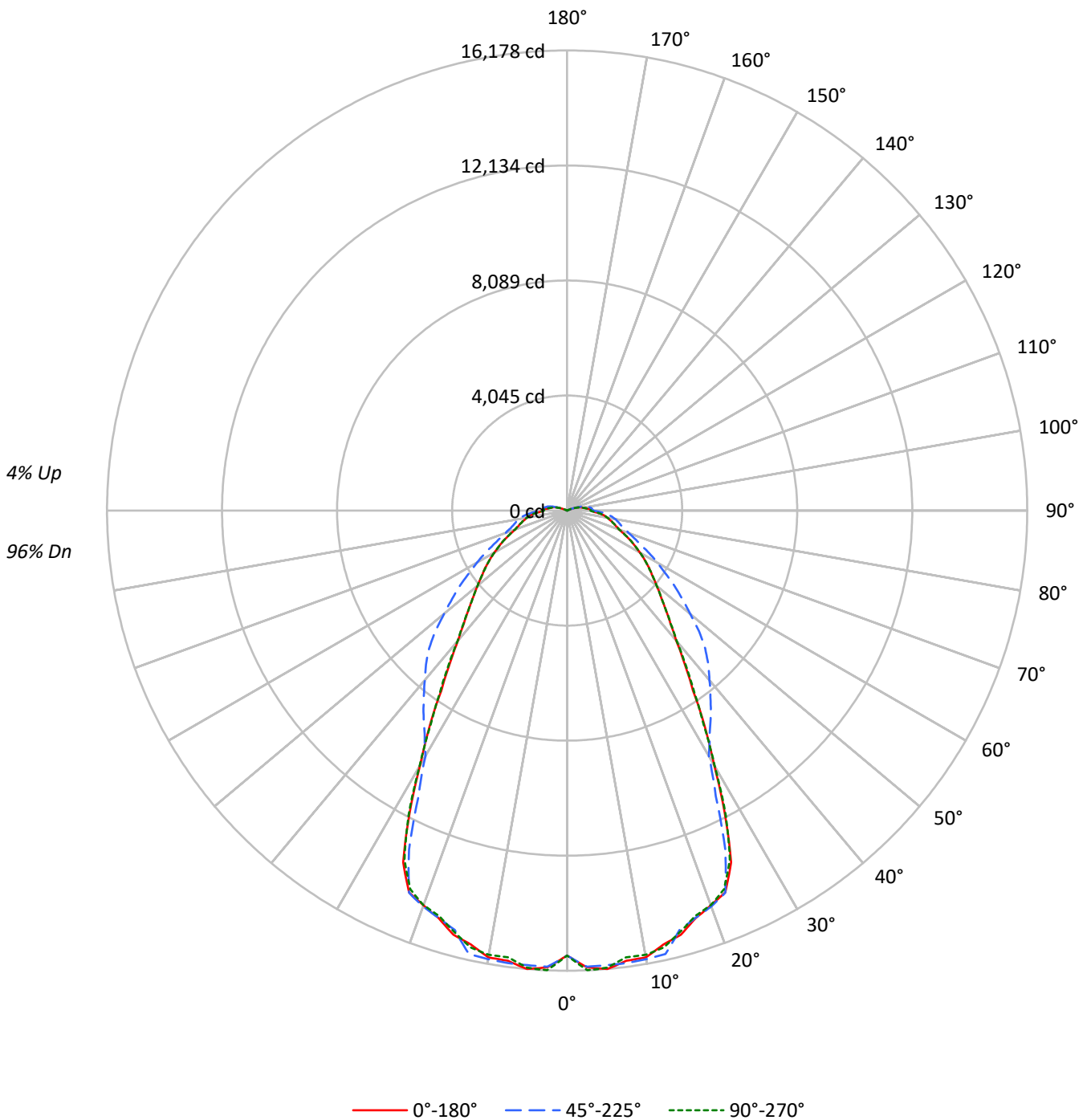
Lumens per Lamp: N/A  
Luminaire Lumens: 32497.0 lumens  
Efficiency: N/A  
Efficacy: 161.6 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11  
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')  
CIE Type: Direct

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	50	30	10	0		
RCR																										
0	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96					96			
1	108	103	99	95	105	100	96	93	95	92	89	91	88	86	86	84	82	80					80			
2	99	91	84	79	96	89	83	78	84	79	75	81	76	73	77	74	71	68					68			
3	91	81	73	67	88	79	72	66	76	70	65	72	67	63	69	65	61	59					59			
4	84	73	65	58	82	71	64	58	68	62	56	65	60	55	63	58	54	52					52			
5	78	66	58	51	76	65	57	51	62	55	50	60	54	49	58	52	48	46					46			
6	73	60	52	46	71	59	51	45	57	50	45	55	49	44	53	48	43	41					41			
7	68	55	47	41	66	54	46	41	52	45	40	51	44	40	49	43	39	37					37			
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	45	40	36	34					34			
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	42	37	33	31					31			
10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	34	30	29					29			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	120610	120610	120610
5°	123902	122861	123555
10°	122255	122766	121602
15°	119388	118048	118625
20°	116114	116449	116072
25°	109915	105965	109014
30°	86083	82999	86461
35°	67003	76423	67582
40°	54627	71203	54822
45°	47549	66833	47575
50°	43172	59233	43201
55°	40422	52693	40208
60°	37759	46679	37759
65°	35336	41722	35336
70°	33110	39261	33064
75°	34484	40085	34375
80°	37883	45434	37815
85°	42869	51840	42768



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1522.8	4.7
10°-20°	4328.3	13.3
20°-30°	5941.0	18.3
30°-40°	5209.0	16.0
40°-50°	4458.1	13.7
50°-60°	3610.3	11.1
60°-70°	2708.0	8.3
70°-80°	1972.4	6.1
80°-90°	1350.1	4.2
90°-100°	834.7	2.6
100°-110°	484.5	1.5
110°-120°	76.6	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°	11792.1	36.3
0°-40°	17001.1	52.3
0°-60°	25069.6	77.1
0°-90°	31100.1	95.7
90°-120°	1395.8	4.3
90°-150°	1396.9	4.3
90°-180°	1397.0	4.3
0°-180°	32497.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	15645	15645	15645	15645	15645	
5°	16178	16029	16042	16074	16133	###
15°	15437	15283	15264	15264	15339	4337
25°	13641	13130	13151	13151	13529	6037
35°	7715	8162	8799	8232	7781	4915
45°	4882	5684	6862	5636	4885	3806
55°	3520	4005	4589	4008	3502	3145
65°	2433	2787	2873	2774	2433	2412
75°	1674	1900	1945	1889	1668	1772
85°	1146	1244	1386	1244	1143	991
90°	842	874	917	858	818	477
95°	717	728	863	741	722	567
105°	445	456	570	448	440	449
115°	48	51	67	51	48	74
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°	15645.2	15645.2	15645.2	15645.2	15645.2
2.5°	16071.6	15957.0	16053.0	16116.9	16175.5
5°	16178.2	16029.0	16042.3	16074.3	16132.9
7.5°	15965.0	15805.1	16042.3	15925.0	15842.4
10°	15946.4	15687.9	16013.0	15797.1	15861.1
12.5°	15623.9	15597.3	15965.0	15701.2	15725.2
15°	15437.4	15282.8	15264.2	15264.2	15338.8
17.5°	15024.3	14931.1	15016.3	14971.0	14947.1
20°	14768.5	14725.9	14811.1	14853.8	14763.2
22.5°	14526.0	14318.2	14536.7	14355.5	14408.8
25°	13641.3	13129.6	13151.0	13151.0	13529.4
27.5°	11994.4	11696.0	11320.2	11738.6	12085.0
30°	10336.9	10424.8	9966.5	10406.2	10382.2
32.5°	8999.1	9247.0	9321.6	9257.6	8932.5
35°	7714.7	8162.4	8799.3	8231.7	7781.3
37.5°	6768.7	7384.3	8279.6	7370.9	6846.0
40°	5971.9	6704.7	7784.0	6736.7	5993.2
42.5°	5372.3	6177.1	7344.3	6145.1	5388.3
45°	4882.0	5684.1	6861.9	5636.1	4884.6
47.5°	4460.9	5228.4	6286.3	5231.1	4460.9
50°	4111.8	4735.4	5641.5	4732.7	4114.5
52.5°	3784.1	4365.0	5092.5	4333.0	3794.7
55°	3520.2	4005.2	4588.8	4007.9	3501.6
57.5°	3229.8	3677.5	4077.2	3672.1	3243.1
60°	2955.3	3355.0	3653.5	3325.7	2955.3
62.5°	2686.2	3061.9	3253.8	3064.6	2691.5
65°	2433.0	2787.4	2872.7	2774.1	2433.0
67.5°	2174.5	2520.9	2560.9	2504.9	2187.8
70°	1950.7	2297.1	2313.1	2273.1	1948.0
72.5°	1798.8	2078.6	2097.2	2083.9	1798.8
75°	1673.5	1900.0	1945.3	1889.4	1668.2
77.5°	1542.9	1729.5	1833.4	1732.1	1553.6
80°	1431.0	1569.6	1716.2	1572.3	1428.4
82.5°	1313.8	1417.7	1580.2	1423.0	1324.4
85°	1145.9	1244.5	1385.7	1244.5	1143.2
87.5°	932.7	1055.3	1143.2	1047.3	916.7
90°	842.1	874.1	916.7	858.1	818.1
92.5°	866.1	818.1	890.1	812.8	831.4
95°	716.8	727.5	863.4	740.8	722.2
97.5°	647.6	676.9	820.8	663.5	644.9
100°	570.3	618.2	738.2	607.6	572.9
102.5°	519.6	551.6	676.9	559.6	527.6
105°	445.0	455.7	570.3	447.7	439.7
107.5°	333.1	333.1	375.7	335.8	327.8
110°	221.2	210.5	226.5	205.2	221.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	117.3	111.9	130.6	109.3	114.6
115°	48.0	50.6	66.6	50.6	48.0
117.5°	13.3	21.3	24.0	21.3	13.3
120°	8.0	10.7	8.0	10.7	8.0
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)