

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: P294578

Luminaire Tested: **BMK-30-NCL-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: P294578
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-L735-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH NARROW CLEAR LENS
Light Source: (528) 70 CRI 3500K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

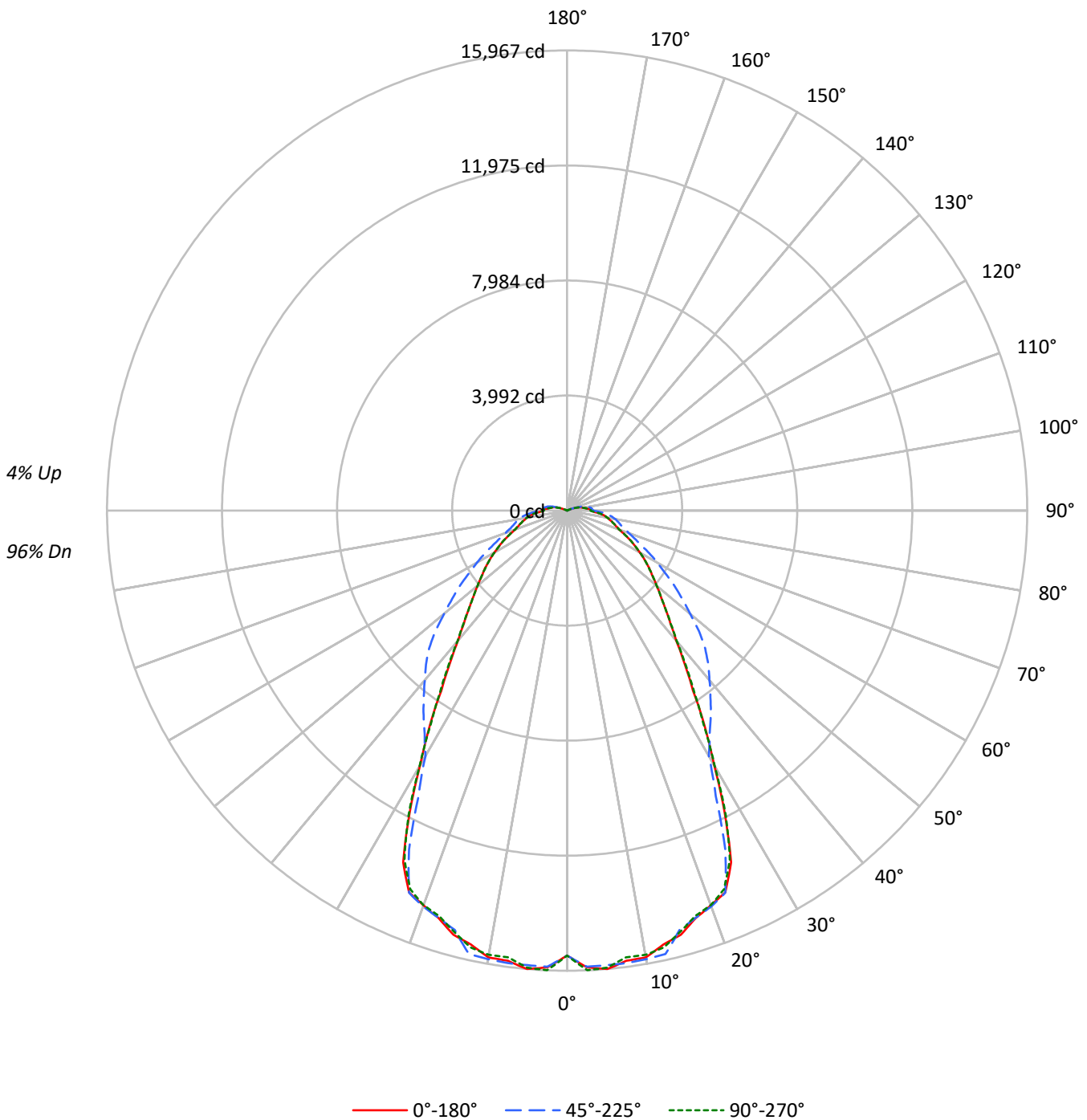
Lumens per Lamp: N/A
Luminaire Lumens: 32073.0 lumens
Efficiency: N/A
Efficacy: 159.5 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	119037	119037	119037
5°	122285	121258	121943
10°	120660	121165	120015
15°	117830	116508	117078
20°	114599	114930	114558
25°	108481	104582	107591
30°	84960	81915	85332
35°	66129	75426	66700
40°	53914	70273	54106
45°	46929	65961	46954
50°	42609	58460	42637
55°	39895	52006	39684
60°	37266	46070	37266
65°	34874	41177	34874
70°	32677	38748	32633
75°	34035	39562	33926
80°	37388	44841	37320
85°	42307	51163	42210



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1502.9	4.7
10°-20°	4271.8	13.3
20°-30°	5863.5	18.3
30°-40°	5141.0	16.0
40°-50°	4400.0	13.7
50°-60°	3563.2	11.1
60°-70°	2672.6	8.3
70°-80°	1946.7	6.1
80°-90°	1332.5	4.2
90°-100°	823.8	2.6
100°-110°	478.2	1.5
110°-120°	75.6	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°	11638.3	36.3
0°-40°	16779.3	52.3
0°-60°	24742.5	77.1
0°-90°	30694.3	95.7
90°-120°	1377.6	4.3
90°-150°	1378.7	4.3
90°-180°	1379.0	4.3
0°-180°	32073.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	15441	15441	15441	15441	15441	
5°	15967	15820	15833	15864	15922	###
15°	15236	15083	15065	15065	15139	4281
25°	13463	12958	12979	12979	13353	5958
35°	7614	8056	8684	8124	7680	4850
45°	4818	5610	6772	5563	4821	3756
55°	3474	3953	4529	3956	3456	3104
65°	2401	2751	2835	2738	2401	2381
75°	1652	1875	1920	1865	1646	1748
85°	1131	1228	1368	1228	1128	978
90°	831	863	905	847	807	471
95°	708	718	852	731	713	560
105°	439	450	563	442	434	443
115°	47	50	66	50	47	73
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°	15441.1	15441.1	15441.1	15441.1	15441.1
2.5°	15861.9	15748.8	15843.5	15906.6	15964.5
5°	15967.1	15819.8	15833.0	15864.5	15922.4
7.5°	15756.7	15598.9	15833.0	15717.3	15635.7
10°	15738.3	15483.2	15804.1	15591.0	15654.1
12.5°	15420.1	15393.8	15756.7	15496.3	15520.0
15°	15236.0	15083.4	15065.0	15065.0	15138.7
17.5°	14828.3	14736.3	14820.4	14775.7	14752.0
20°	14575.8	14533.7	14617.9	14660.0	14570.6
22.5°	14336.5	14131.3	14347.0	14168.2	14220.8
25°	13463.3	12958.3	12979.4	12979.4	13352.8
27.5°	11837.9	11543.4	11172.5	11585.4	11927.3
30°	10202.0	10288.8	9836.4	10270.4	10246.7
32.5°	8881.7	9126.3	9200.0	9136.8	8816.0
35°	7614.0	8055.9	8684.5	8124.3	7679.8
37.5°	6680.4	7287.9	8171.6	7274.8	6756.6
40°	5894.0	6617.2	7682.4	6648.8	5915.0
42.5°	5302.2	6096.5	7248.5	6064.9	5318.0
45°	4818.3	5609.9	6772.4	5562.6	4820.9
47.5°	4402.7	5160.2	6204.3	5162.8	4402.7
50°	4058.2	4673.6	5567.8	4671.0	4060.8
52.5°	3734.7	4308.0	5026.1	4276.5	3745.2
55°	3474.3	3953.0	4529.0	3955.6	3455.9
57.5°	3187.6	3629.5	4024.0	3624.2	3200.8
60°	2916.7	3311.3	3605.8	3282.3	2916.7
62.5°	2651.1	3021.9	3211.3	3024.6	2656.4
65°	2401.2	2751.0	2835.2	2737.9	2401.2
67.5°	2146.1	2488.0	2527.5	2472.3	2159.3
70°	1925.2	2267.1	2282.9	2243.4	1922.6
72.5°	1775.3	2051.5	2069.9	2056.7	1775.3
75°	1651.7	1875.2	1919.9	1864.7	1646.4
77.5°	1522.8	1706.9	1809.5	1709.5	1533.3
80°	1412.3	1549.1	1693.8	1551.7	1409.7
82.5°	1296.6	1399.2	1559.6	1404.5	1307.1
85°	1130.9	1228.2	1367.6	1228.2	1128.3
87.5°	920.5	1041.5	1128.3	1033.6	904.7
90°	831.1	862.7	904.7	846.9	807.4
92.5°	854.8	807.4	878.4	802.2	820.6
95°	707.5	718.0	852.1	731.2	712.7
97.5°	639.1	668.0	810.1	654.9	636.5
100°	562.8	610.2	728.5	599.7	565.5
102.5°	512.9	544.4	668.0	552.3	520.8
105°	439.2	449.7	562.8	441.9	434.0
107.5°	328.8	328.8	370.8	331.4	323.5
110°	218.3	207.8	223.6	202.5	218.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	115.7	110.5	128.9	107.8	113.1
115°	47.3	50.0	65.8	50.0	47.3
117.5°	13.2	21.0	23.7	21.0	13.2
120°	7.9	10.5	7.9	10.5	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)