

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: P294509

Luminaire Tested: **BMK-30-WCL-UNV-L835-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: P294509
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1903-198-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-30-WCL-UNV-L835-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE CLEAR LENS
Light Source: (528) 80 CRI 3500K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30546.0 lumens
Efficiency: N/A
Efficacy: 151.9 lumens/watt
Spacing Criteria (0/90/45): 1.8 / 1.79 / 1.79
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

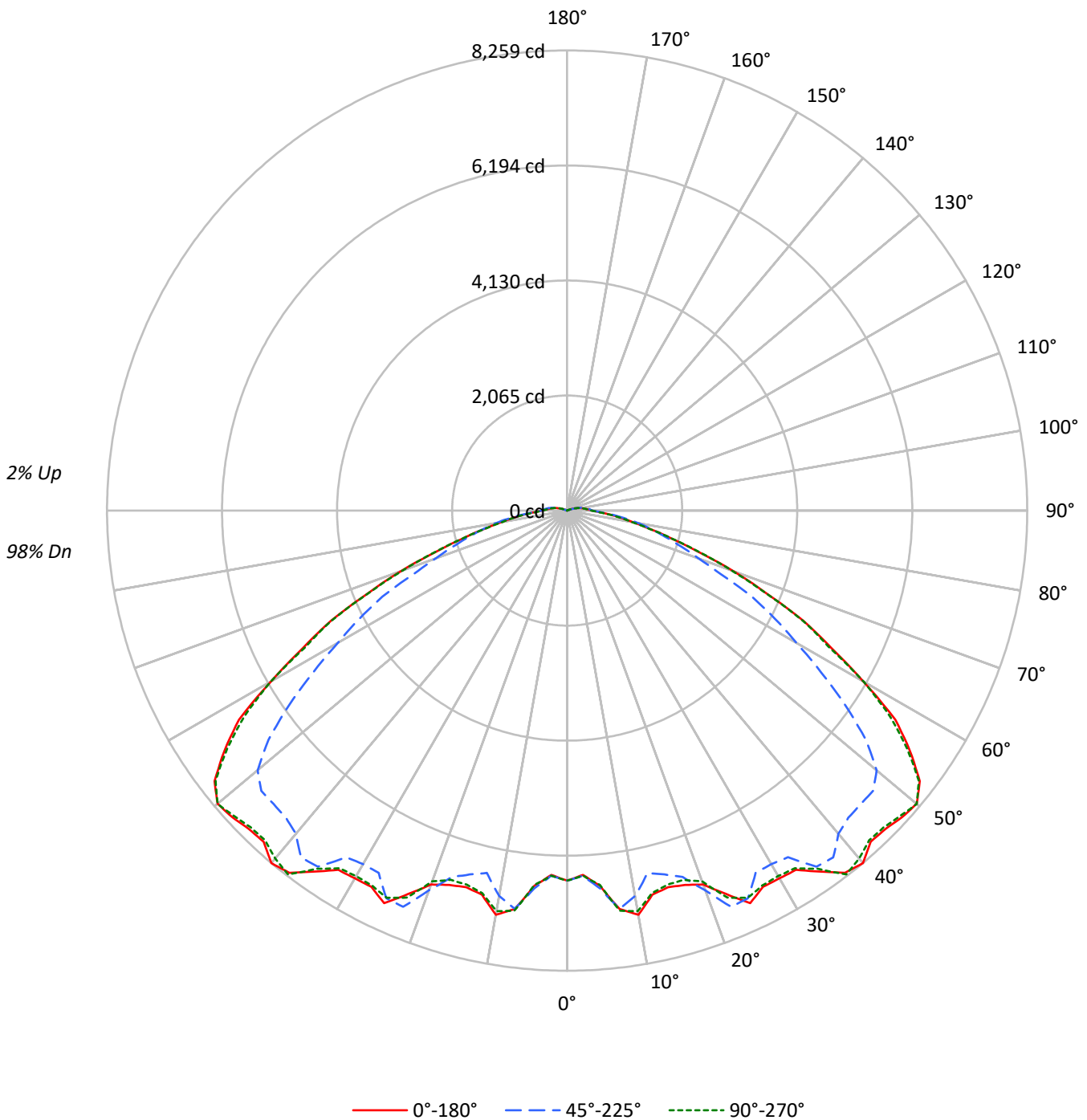
Input Watts (W): 201.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	108	102	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83	80
2	97	88	81	75	94	86	80	74	82	77	72	79	74	70	75	71	68	66
3	88	77	68	61	85	75	67	60	72	65	59	68	63	58	66	61	56	54
4	80	67	58	51	77	66	57	50	63	55	49	60	54	48	58	52	47	45
5	73	59	50	43	71	58	49	42	56	48	42	53	46	41	51	45	40	38
6	67	53	43	37	65	52	43	36	50	42	36	48	41	35	46	40	35	33
7	62	47	38	32	60	46	38	32	45	37	31	43	36	31	41	35	30	28
8	57	43	34	28	55	42	34	28	41	33	27	39	32	27	38	31	27	25
9	53	39	30	25	51	38	30	24	37	29	24	36	29	24	35	28	24	22
10	50	36	27	22	48	35	27	22	34	27	22	33	26	21	32	26	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	51203	51203	51203
5°	51766	52141	51636
10°	56473	53866	55967
15°	54109	52294	53750
20°	56144	57029	55663
25°	62644	61855	61797
30°	63461	60996	63075
35°	68671	67778	68139
40°	75547	69282	74562
45°	78701	72553	78271
50°	85971	76133	85996
55°	86212	70059	85538
60°	78454	60762	78516
65°	67934	53153	67755
70°	53731	42603	53191
75°	40025	37555	40277
80°	31734	34389	31022
85°	27822	29378	27089



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	667.1	2.2
10°-20°	1962.3	6.4
20°-30°	3431.3	11.2
30°-40°	4886.2	16.0
40°-50°	6047.7	19.8
50°-60°	6015.9	19.7
60°-70°	4077.6	13.3
70°-80°	2022.0	6.6
80°-90°	843.4	2.8
90°-100°	396.9	1.3
100°-110°	172.5	0.6
110°-120°	22.3	0.1
120°-130°	0.6	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°	6060.7	19.8
0°-40°	10946.9	35.8
0°-60°	23010.6	75.3
0°-90°	29953.6	98.1
90°-120°	591.8	1.9
90°-150°	592.4	1.9
90°-180°	592.0	1.9
0°-180°	30546.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6642	6642	6642	6642	6642	
5°	6759	6732	6808	6762	6742	671
15°	6997	6745	6762	6757	6950	2007
25°	7775	7310	7677	7280	7669	3502
35°	7907	7931	7804	7951	7846	4986
45°	8080	7833	7449	7804	8036	6296
55°	7508	6816	6101	6764	7449	6629
65°	4678	4066	3660	4083	4665	4580
75°	1942	1818	1822	1837	1955	2142
85°	744	724	785	722	724	701
90°	445	475	453	470	438	252
95°	340	364	379	360	338	261
105°	164	157	152	159	164	173
115°	12	15	17	15	12	22
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°	6641.9	6641.9	6641.9	6641.9	6641.9
2.5°	6544.0	6570.9	6561.2	6551.4	6561.2
5°	6759.3	6732.4	6808.2	6761.8	6742.2
7.5°	7211.9	7145.8	7207.0	7148.3	7241.2
10°	7366.0	7255.9	7026.0	7229.0	7300.0
12.5°	7060.2	6952.6	6661.5	6972.1	7030.9
15°	6996.6	6744.6	6761.8	6756.9	6950.1
17.5°	7043.1	6742.2	6893.9	6747.1	6950.1
20°	7140.9	7006.4	7253.5	7011.3	7079.8
22.5°	7449.2	7331.8	7696.3	7326.9	7517.7
25°	7774.6	7309.7	7676.7	7280.4	7669.4
27.5°	7613.1	7353.8	7329.3	7324.4	7586.2
30°	7620.4	7434.5	7324.4	7454.1	7574.0
32.5°	7644.9	7583.7	7378.2	7610.7	7610.7
35°	7906.7	7931.1	7803.9	7950.7	7845.5
37.5°	8192.9	7928.7	7845.5	7936.0	8232.0
40°	8258.9	7794.1	7574.0	7784.3	8151.3
42.5°	8063.2	7855.3	7473.7	7830.8	8024.1
45°	8080.4	7833.3	7449.2	7803.9	8036.3
47.5°	8148.9	7982.5	7446.7	7958.0	8112.2
50°	8188.0	7686.5	7251.0	7684.0	8190.4
52.5°	7977.6	7319.5	6754.4	7309.7	7953.1
55°	7507.9	6815.6	6101.2	6764.2	7449.2
57.5°	6984.4	6235.8	5406.5	6194.2	6871.8
60°	6140.4	5509.2	4755.7	5499.4	6145.3
62.5°	5347.8	4909.9	4205.3	4895.2	5291.5
65°	4677.5	4065.9	3659.8	4083.0	4665.2
67.5°	3855.5	3380.9	2982.1	3383.3	3833.5
70°	3165.6	2832.9	2510.0	2810.9	3133.8
72.5°	2483.1	2294.7	2138.1	2287.4	2490.4
75°	1942.4	1817.7	1822.5	1837.2	1954.6
77.5°	1519.2	1455.6	1553.4	1462.9	1507.0
80°	1198.7	1164.5	1299.0	1164.5	1171.8
82.5°	954.1	922.3	1029.9	924.7	951.6
85°	743.7	724.1	785.3	721.7	724.1
87.5°	557.8	567.6	574.9	570.0	543.1
90°	445.2	474.6	452.6	469.7	437.9
92.5°	391.4	415.9	415.9	423.2	381.6
95°	340.0	364.5	379.2	359.6	337.6
97.5°	296.0	320.5	337.6	320.5	296.0
100°	254.4	271.5	288.7	266.7	249.5
102.5°	212.8	220.2	225.1	220.2	210.4
105°	163.9	156.6	151.7	159.0	163.9
107.5°	115.0	107.6	90.5	107.6	119.9
110°	68.5	63.6	53.8	63.6	73.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	34.2	31.8	31.8	34.2	36.7
115°	12.2	14.7	17.1	14.7	12.2
117.5°	4.9	7.3	7.3	7.3	4.9
120°	4.9	4.9	4.9	4.9	4.9
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)