

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: P294513

Luminaire Tested: **BMK-36-WCL-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: P294513
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-36-WCL-UNV-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE 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: 39628.9 lumens
Efficiency: N/A
Efficacy: 163.1 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

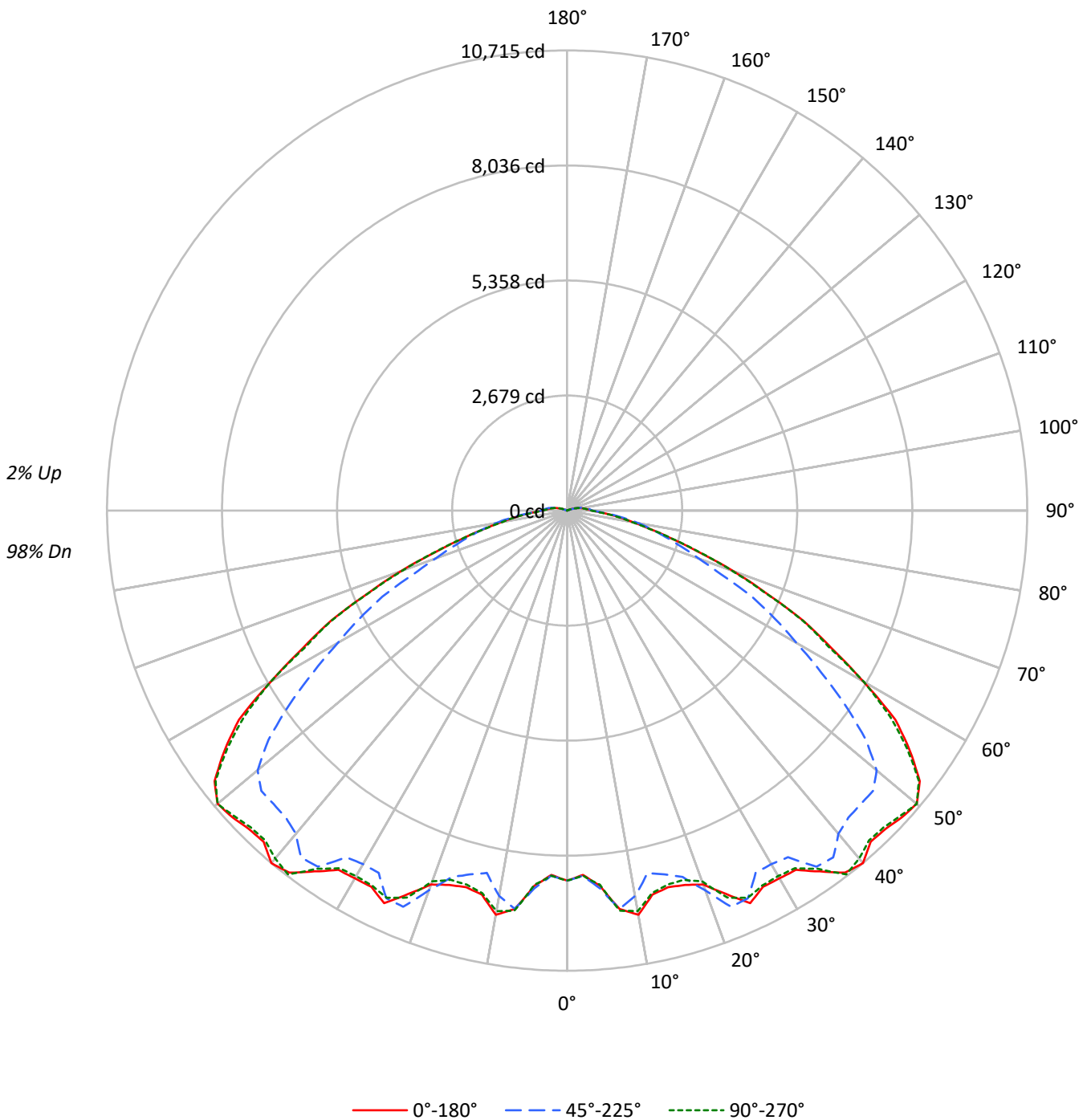
Input Watts (W): 243
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	66428	66428	66428
5°	67159	67646	66989
10°	73265	69883	72608
15°	70199	67843	69733
20°	72838	73986	72215
25°	81272	80248	80172
30°	82332	79134	81830
35°	89090	87932	88401
40°	98012	89882	96734
45°	102102	94126	101546
50°	111534	98772	111568
55°	111848	90893	110973
60°	101782	78831	101863
65°	88133	68958	87904
70°	69708	55270	69007
75°	51927	48723	52255
80°	41171	44616	40248
85°	36094	38114	35143



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	865.5	2.2
10°-20°	2545.8	6.4
20°-30°	4451.6	11.2
30°-40°	6339.1	16.0
40°-50°	7846.1	19.8
50°-60°	7804.8	19.7
60°-70°	5290.1	13.3
70°-80°	2623.2	6.6
80°-90°	1094.2	2.8
90°-100°	514.9	1.3
100°-110°	223.8	0.6
110°-120°	29.0	0.1
120°-130°	0.7	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°	7862.9	19.8
0°-40°	14202.0	35.8
0°-60°	29852.9	75.3
0°-90°	38860.5	98.1
90°-120°	767.7	1.9
90°-150°	768.5	1.9
90°-180°	768.0	1.9
0°-180°	39628.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8617	8617	8617	8617	8617	
5°	8769	8734	8833	8772	8747	871
15°	9077	8750	8772	8766	9017	2604
25°	10086	9483	9959	9445	9950	4544
35°	10258	10290	10124	10315	10178	6469
45°	10483	10162	9664	10124	10426	8168
55°	9740	8842	7916	8776	9664	8601
65°	6068	5275	4748	5297	6052	5942
75°	2520	2358	2364	2384	2536	2779
85°	965	939	1019	936	939	909
90°	578	616	587	609	568	327
95°	441	473	492	466	438	339
105°	213	203	197	206	213	225
115°	16	19	22	19	16	29
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°	8616.9	8616.9	8616.9	8616.9	8616.9
2.5°	8489.9	8524.8	8512.2	8499.5	8512.2
5°	8769.2	8734.3	8832.7	8772.4	8747.0
7.5°	9356.4	9270.7	9350.0	9273.9	9394.5
10°	9556.3	9413.5	9115.2	9378.6	9470.6
12.5°	9159.6	9020.0	8642.3	9045.4	9121.5
15°	9077.1	8750.2	8772.4	8766.1	9016.8
17.5°	9137.4	8747.0	8943.8	8753.4	9016.8
20°	9264.3	9089.8	9410.3	9096.1	9185.0
22.5°	9664.2	9511.9	9984.8	9505.6	9753.1
25°	10086.4	9483.3	9959.4	9445.2	9949.9
27.5°	9876.9	9540.5	9508.7	9502.4	9842.0
30°	9886.4	9645.2	9502.4	9670.6	9826.1
32.5°	9918.1	9838.8	9572.2	9873.7	9873.7
35°	10257.7	10289.5	10124.4	10314.9	10178.4
37.5°	10629.1	10286.3	10178.4	10295.8	10679.9
40°	10714.8	10111.7	9826.1	10099.1	10575.1
42.5°	10460.9	10191.1	9696.0	10159.4	10410.1
45°	10483.1	10162.5	9664.2	10124.4	10426.0
47.5°	10572.0	10356.1	9661.1	10324.4	10524.3
50°	10622.7	9972.1	9407.2	9968.9	10625.9
52.5°	10349.8	9496.0	8762.9	9483.3	10318.0
55°	9740.4	8842.2	7915.5	8775.6	9664.2
57.5°	9061.2	8090.0	7014.1	8036.1	8915.2
60°	7966.3	7147.4	6169.9	7134.7	7972.6
62.5°	6937.9	6369.8	5455.8	6350.8	6864.9
65°	6068.3	5274.9	4748.0	5297.1	6052.5
67.5°	5001.9	4386.2	3868.9	4389.4	4973.4
70°	4106.9	3675.3	3256.3	3646.7	4065.6
72.5°	3221.4	2977.0	2773.9	2967.5	3230.9
75°	2520.0	2358.1	2364.5	2383.5	2535.9
77.5°	1970.9	1888.4	2015.4	1897.9	1955.1
80°	1555.2	1510.7	1685.3	1510.7	1520.3
82.5°	1237.8	1196.5	1336.2	1199.7	1234.6
85°	964.8	939.4	1018.8	936.3	939.4
87.5°	723.6	736.3	745.8	739.5	704.6
90°	577.6	615.7	587.2	609.4	568.1
92.5°	507.8	539.5	539.5	549.1	495.1
95°	441.2	472.9	491.9	466.5	438.0
97.5°	384.0	415.8	438.0	415.8	384.0
100°	330.1	352.3	374.5	345.9	323.7
102.5°	276.1	285.6	292.0	285.6	272.9
105°	212.6	203.1	196.8	206.3	212.6
107.5°	149.2	139.6	117.4	139.6	155.5
110°	88.9	82.5	69.8	82.5	95.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	44.4	41.3	41.3	44.4	47.6
115°	15.9	19.0	22.2	19.0	15.9
117.5°	6.3	9.5	9.5	9.5	6.3
120°	6.3	6.3	6.3	6.3	6.3
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)