

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: P294515

Luminaire Tested: **BMK-36-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: P294515
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-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: 36382.0 lumens
Efficiency: N/A
Efficacy: 149.7 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

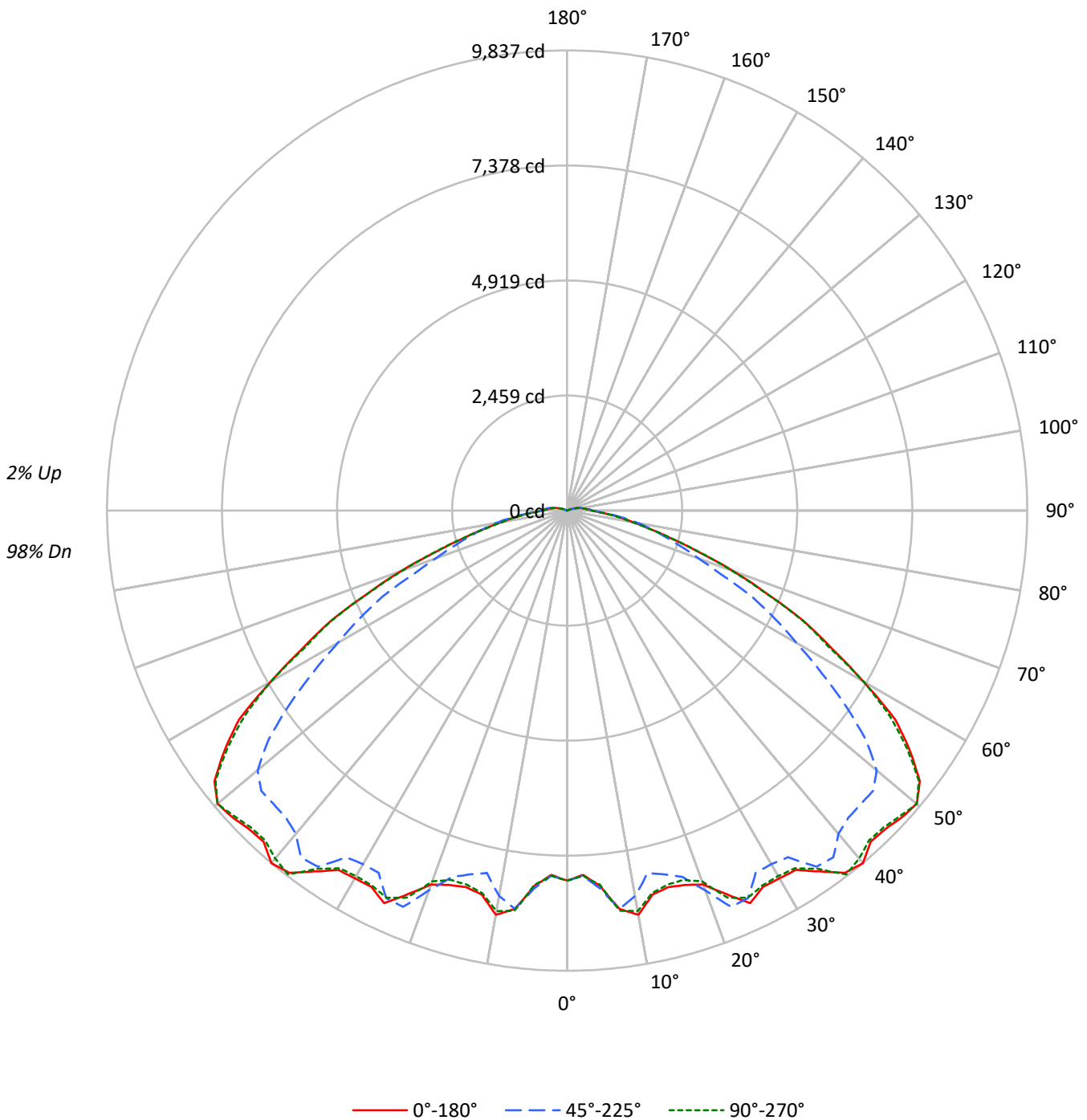
Input Watts (W): 243
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	60986	60986	60986
5°	61657	62103	61501
10°	67262	64157	66659
15°	64448	62284	64019
20°	66871	67924	66298
25°	74612	73673	73602
30°	75586	72650	75125
35°	81791	80728	81157
40°	89981	82518	88808
45°	93737	86415	93226
50°	102396	90679	102427
55°	102683	83445	101881
60°	93442	72372	93517
65°	80912	63308	80700
70°	63996	50742	63353
75°	47672	44732	47973
80°	37796	40960	36949
85°	33138	34990	32267



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	794.6	2.2
10°-20°	2337.2	6.4
20°-30°	4086.8	11.2
30°-40°	5819.7	16.0
40°-50°	7203.2	19.8
50°-60°	7165.3	19.7
60°-70°	4856.7	13.3
70°-80°	2408.3	6.6
80°-90°	1004.6	2.8
90°-100°	472.7	1.3
100°-110°	205.5	0.6
110°-120°	26.6	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°	7218.6	19.8
0°-40°	13038.3	35.8
0°-60°	27406.9	75.3
0°-90°	35676.5	98.1
90°-120°	704.8	1.9
90°-150°	705.5	1.9
90°-180°	706.0	1.9
0°-180°	36382.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7911	7911	7911	7911	7911	
5°	8051	8019	8109	8054	8030	799
15°	8333	8033	8054	8048	8278	2391
25°	9260	8706	9143	8671	9135	4172
35°	9417	9446	9295	9470	9344	5939
45°	9624	9330	8872	9295	9572	7499
55°	8942	8118	7267	8057	8872	7896
65°	5571	4843	4359	4863	5556	5456
75°	2314	2165	2171	2188	2328	2551
85°	886	862	935	860	862	835
90°	530	565	539	559	522	300
95°	405	434	452	428	402	311
105°	195	186	181	189	195	207
115°	15	18	20	18	15	26
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



TEST NUMBER: P294515

CATALOG NUMBER: BMK-36-WCL-UNV-L835-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7910.9	7910.9	7910.9	7910.9	7910.9
2.5°	7794.3	7826.4	7814.7	7803.1	7814.7
5°	8050.7	8018.7	8109.0	8053.6	8030.3
7.5°	8589.8	8511.1	8583.9	8514.0	8624.7
10°	8773.3	8642.2	8368.3	8610.2	8694.7
12.5°	8409.1	8280.9	7934.2	8304.2	8374.2
15°	8333.4	8033.2	8053.6	8047.8	8278.0
17.5°	8388.7	8030.3	8211.0	8036.2	8278.0
20°	8505.3	8345.0	8639.3	8350.8	8432.4
22.5°	8872.4	8732.5	9166.7	8726.7	8954.0
25°	9259.9	8706.3	9143.4	8671.4	9134.6
27.5°	9067.6	8758.8	8729.6	8723.8	9035.6
30°	9076.4	8854.9	8723.8	8878.2	9021.0
32.5°	9105.5	9032.7	8787.9	9064.7	9064.7
35°	9417.3	9446.4	9294.9	9469.7	9344.4
37.5°	9758.2	9443.5	9344.4	9452.2	9804.8
40°	9836.9	9283.2	9021.0	9271.6	9708.7
42.5°	9603.8	9356.1	8901.5	9327.0	9557.1
45°	9624.2	9329.9	8872.4	9294.9	9571.7
47.5°	9705.7	9507.6	8869.5	9478.5	9662.0
50°	9752.4	9155.0	8636.4	9152.1	9755.3
52.5°	9501.8	8718.0	8044.9	8706.3	9472.6
55°	8942.3	8117.7	7266.9	8056.6	8872.4
57.5°	8318.8	7427.2	6439.4	7377.6	8184.8
60°	7313.5	6561.8	5664.4	6550.1	7319.4
62.5°	6369.5	5847.9	5008.8	5830.4	6302.5
65°	5571.1	4842.7	4359.0	4863.1	5556.5
67.5°	4592.1	4026.8	3551.9	4029.7	4565.9
70°	3770.4	3374.1	2989.5	3347.9	3732.5
72.5°	2957.5	2733.1	2546.6	2724.4	2966.2
75°	2313.5	2164.9	2170.8	2188.2	2328.1
77.5°	1809.4	1733.7	1850.2	1742.4	1794.9
80°	1427.7	1387.0	1547.2	1387.0	1395.7
82.5°	1136.4	1098.5	1226.7	1101.4	1133.5
85°	885.8	862.5	935.3	859.6	862.5
87.5°	664.3	676.0	684.7	678.9	646.9
90°	530.3	565.3	539.0	559.4	521.6
92.5°	466.2	495.3	495.3	504.1	454.5
95°	405.0	434.2	451.6	428.3	402.1
97.5°	352.6	381.7	402.1	381.7	352.6
100°	303.0	323.4	343.8	317.6	297.2
102.5°	253.5	262.2	268.1	262.2	250.6
105°	195.2	186.5	180.7	189.4	195.2
107.5°	136.9	128.2	107.8	128.2	142.8
110°	81.6	75.8	64.1	75.8	87.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	40.8	37.9	37.9	40.8	43.7
115°	14.6	17.5	20.4	17.5	14.6
117.5°	5.8	8.7	8.7	8.7	5.8
120°	5.8	5.8	5.8	5.8	5.8
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)