

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: P381639

Luminaire Tested: **BMK-50-WCL-UNV-L735-CD-U**

Issue Date: 2/4/2020

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: P381639
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-2)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-50-WCL-UNV-L735-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH WIDE CLEAR LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 54413.9 lumens
Efficiency: N/A
Efficacy: 163.7 lumens/watt
Spacing Criteria (0/90/45): 1.76 / 1.77 / 1.85
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

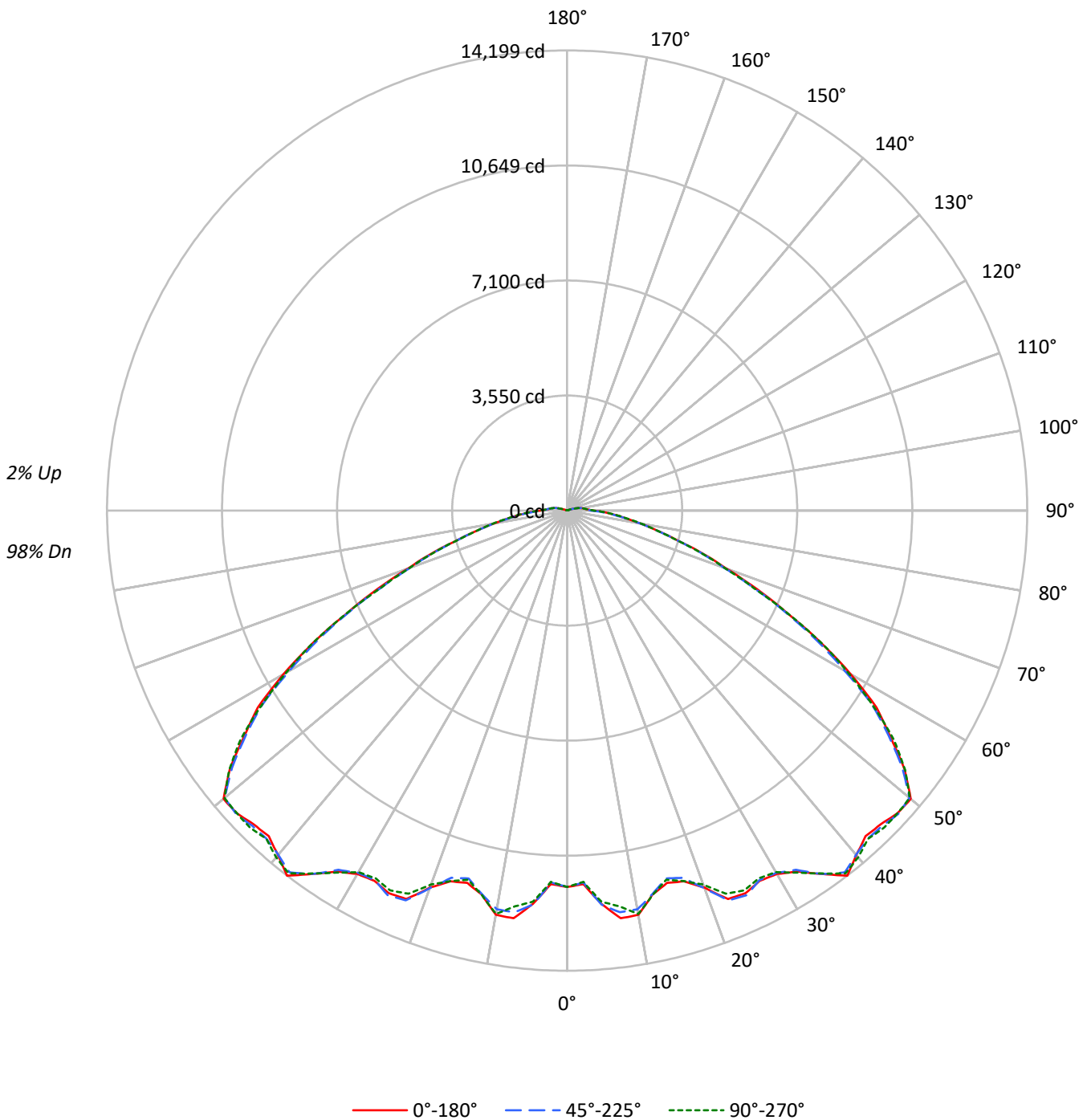
Input Watts (W): 332.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	102	98	93	104	100	95	92	95	92	88	91	88	85	87	85	82	80
2	97	88	81	74	94	86	79	73	82	76	71	78	74	69	75	71	68	65
3	88	76	68	61	85	74	66	60	71	64	59	68	62	57	65	60	56	54
4	80	67	57	50	77	65	56	50	62	55	49	60	53	48	57	52	47	45
5	73	59	49	42	70	58	49	42	55	47	41	53	46	41	51	45	40	38
6	67	52	43	36	64	51	42	36	49	41	35	47	40	35	46	39	34	32
7	61	47	38	31	59	46	37	31	44	36	31	43	36	30	41	35	30	28
8	57	43	34	27	55	42	33	27	40	32	27	39	32	27	37	31	26	24
9	53	39	30	24	51	38	30	24	37	29	24	35	29	24	34	28	23	21
10	49	35	27	22	48	35	27	22	34	26	21	33	26	21	32	25	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	89557	89557	89557
5°	93357	93516	92782
10°	97155	95836	96938
15°	92032	90912	91266
20°	97390	97544	96585
25°	105005	105584	104232
30°	107863	107510	107284
35°	118916	118935	118765
40°	127027	126887	127824
45°	133354	133990	134817
50°	145381	144855	144947
55°	139884	139171	141260
60°	129300	126613	128088
65°	108962	108393	109136
70°	88630	87280	87779
75°	71976	71888	71552
80°	60752	60579	61705
85°	54515	52599	55859



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1171.4	2.2
10°-20°	3424.2	6.3
20°-30°	5966.5	11.0
30°-40°	8563.3	15.7
40°-50°	10677.0	19.6
50°-60°	10794.4	19.8
60°-70°	7424.4	13.6
70°-80°	3776.6	6.9
80°-90°	1609.0	3.0
90°-100°	643.3	1.2
100°-110°	275.9	0.5
110°-120°	31.0	0.1
120°-130°	14.4	0.0
130°-140°	15.9	0.0
140°-150°	13.4	0.0
150°-160°	7.4	0.0
160°-170°	4.3	0.0
170°-180°	1.5	0.0
0°-30°	10562.0	19.4
0°-40°	19125.3	35.1
0°-60°	40596.7	74.6
0°-90°	53406.7	98.1
90°-120°	950.2	1.7
90°-150°	993.9	1.8
90°-180°	1007.0	1.9
0°-180°	54413.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	11611	11611	11611	11611	11611	
5°	12184	12137	12205	12174	12109	###
15°	11894	11863	11750	11831	11795	3437
25°	13026	13045	13097	13121	12930	5967
35°	13685	13710	13688	13699	13668	8575
45°	13685	13728	13751	13744	13836	10650
55°	12176	12111	12114	12087	12296	10869
65°	7499	7484	7460	7471	7511	7501
75°	3492	3457	3487	3456	3471	3810
85°	1457	1434	1406	1440	1493	1363
90°	820	783	732	781	822	473
95°	567	577	592	569	574	442
105°	249	258	257	255	253	274
115°	20	20	20	18	20	31
125°	16	16	16	16	16	14
135°	21	21	21	21	21	16
145°	22	22	22	22	22	14
155°	15	15	15	15	15	8
165°	16	15	15	15	15	5
175°	15	15	15	15	15	1
180°	15	15	15	15	15	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	11611.3	11611.3	11611.3	11611.3	11611.3
2.5°	11536.1	11452.3	11486.1	11512.2	11468.6
5°	12183.9	12137.1	12204.6	12174.1	12108.8
7.5°	12686.9	12491.0	12499.7	12451.8	12315.7
10°	12666.2	12514.9	12494.2	12609.6	12637.9
12.5°	12143.6	12097.9	12127.3	12174.1	12157.8
15°	11894.3	11862.8	11749.5	11831.2	11795.3
17.5°	11994.5	11908.5	11878.0	12008.6	11985.8
20°	12381.0	12336.4	12400.6	12410.4	12278.6
22.5°	12972.2	12914.5	13013.5	12905.8	12795.8
25°	13025.5	13045.1	13097.4	13121.3	12929.7
27.5°	12876.4	12912.3	12854.6	12950.4	12793.6
30°	12946.0	12955.8	12903.6	12935.2	12876.4
32.5°	13199.7	13197.5	13145.3	13273.7	13248.7
35°	13685.3	13710.3	13687.5	13699.4	13667.9
37.5°	14199.2	14065.2	14075.0	14088.1	14108.8
40°	13880.2	13925.9	13864.9	13976.0	13967.3
42.5°	13627.6	13775.6	13729.9	13720.1	13738.6
45°	13685.3	13727.7	13750.6	13744.1	13835.5
47.5°	13826.8	13847.5	13858.4	13786.5	13825.7
50°	13839.9	13727.7	13789.8	13731.0	13798.5
52.5°	13124.6	13090.8	13031.0	13177.9	13142.0
55°	12176.3	12111.0	12114.3	12087.0	12296.1
57.5°	11319.5	11106.1	11166.0	11145.3	11182.3
60°	10115.4	9895.4	9905.2	9951.0	10020.6
62.5°	8839.4	8824.1	8701.1	8799.1	8854.6
65°	7499.1	7483.9	7459.9	7470.8	7511.1
67.5°	6347.3	6176.3	6211.2	6186.1	6227.5
70°	5219.4	5150.8	5139.9	5145.3	5169.3
72.5°	4371.2	4299.4	4308.1	4279.8	4319.0
75°	3491.5	3456.7	3487.2	3455.6	3470.9
77.5°	2829.6	2816.5	2824.2	2805.6	2826.3
80°	2293.9	2285.2	2287.4	2289.6	2329.9
82.5°	1831.2	1821.4	1787.7	1825.8	1842.1
85°	1456.7	1433.9	1405.5	1440.4	1492.6
87.5°	1147.5	1102.9	1082.2	1118.1	1153.0
90°	819.8	782.8	731.6	780.6	822.0
92.5°	661.9	670.7	647.8	657.6	677.2
95°	567.2	577.0	592.3	569.4	573.8
97.5°	509.5	510.6	510.6	509.5	511.7
100°	432.2	436.6	438.8	437.7	434.4
102.5°	360.4	363.6	354.9	358.2	356.0
105°	249.3	258.0	256.9	254.8	252.6
107.5°	162.2	162.2	159.0	162.2	168.8
110°	88.2	86.0	83.8	87.1	90.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	40.3	41.4	42.5	40.3	40.3
115°	19.6	19.6	19.6	18.5	19.6
117.5°	13.1	13.1	13.1	13.1	13.1
120°	13.1	13.1	13.1	13.1	14.2
122.5°	14.2	15.2	14.2	15.2	15.2
125°	16.3	16.3	16.3	16.3	16.3
127.5°	17.4	17.4	17.4	17.4	17.4
130°	18.5	18.5	18.5	18.5	18.5
132.5°	19.6	19.6	19.6	19.6	19.6
135°	20.7	20.7	20.7	20.7	20.7
137.5°	21.8	21.8	21.8	21.8	21.8
140°	22.9	21.8	21.8	22.9	21.8
142.5°	22.9	21.8	21.8	22.9	21.8
145°	21.8	21.8	21.8	21.8	21.8
147.5°	20.7	20.7	20.7	20.7	19.6
150°	18.5	18.5	18.5	18.5	18.5
152.5°	17.4	16.3	16.3	16.3	16.3
155°	15.2	15.2	15.2	15.2	15.2
157.5°	15.2	15.2	15.2	15.2	15.2
160°	16.3	15.2	15.2	15.2	15.2
162.5°	16.3	15.2	15.2	15.2	15.2
165°	16.3	15.2	15.2	15.2	15.2
167.5°	16.3	15.2	15.2	15.2	15.2
170°	16.3	15.2	15.2	15.2	15.2
172.5°	15.2	15.2	15.2	15.2	15.2
175°	15.2	15.2	15.2	15.2	15.2
177.5°	15.2	15.2	15.2	15.2	16.3
180°	15.2	15.2	15.2	15.2	15.2

(END OF REPORT)