

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: P381648

Luminaire Tested: **BMK-60-WCL-UNV-L835-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: P381648
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-60-WCL-UNV-L835-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: 59691.3 lumens
Efficiency: N/A
Efficacy: 147.1 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

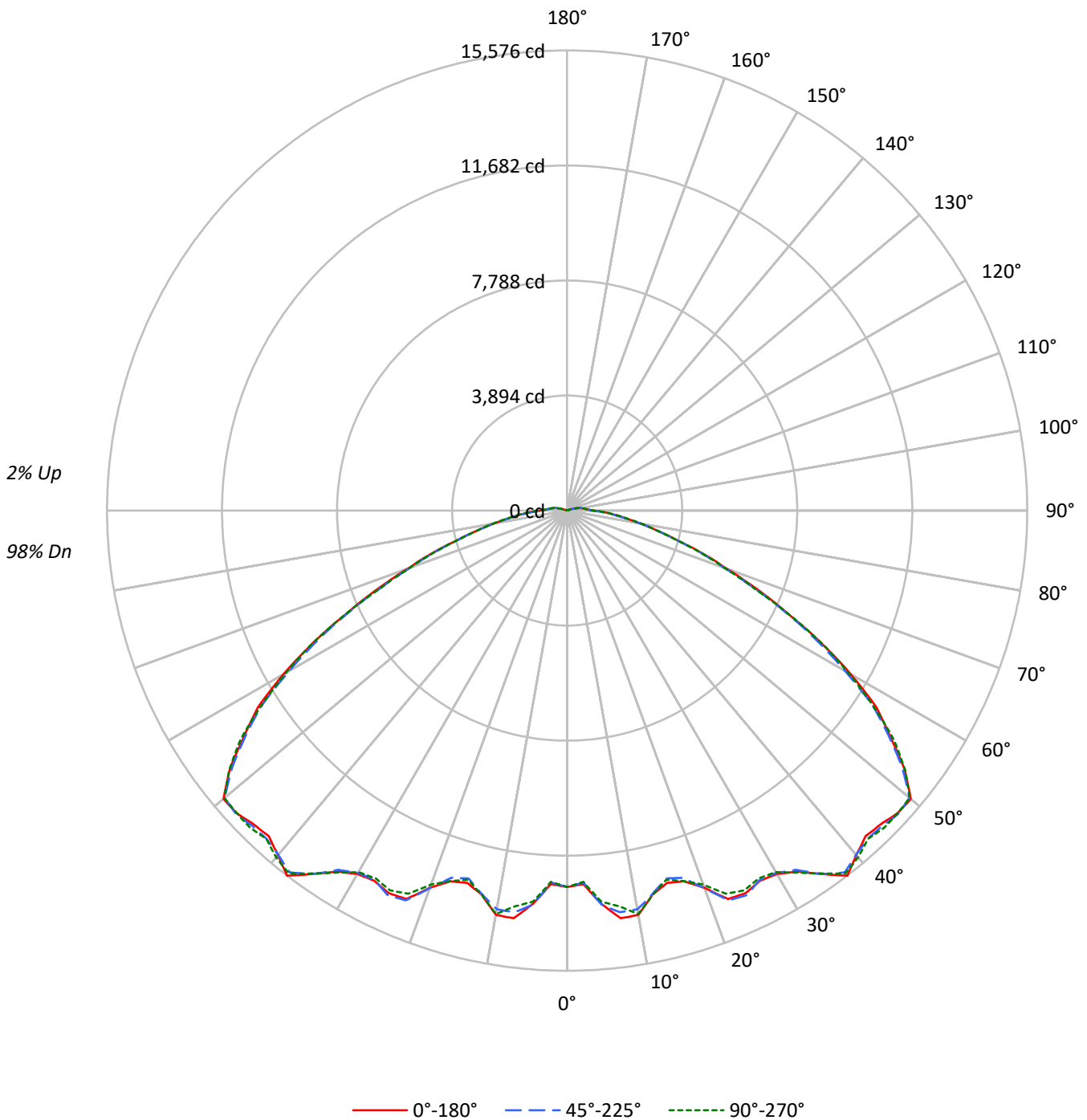
Input Watts (W): 405.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	98243	98243	98243
5°	102412	102586	101781
10°	106579	105131	106340
15°	100958	99729	100117
20°	106836	107005	105953
25°	115189	115824	114341
30°	118325	117937	117688
35°	130449	130470	130283
40°	139346	139193	140221
45°	146288	146985	147893
50°	159482	158904	159005
55°	153450	152669	154960
60°	141839	138893	140511
65°	119531	118906	119722
70°	97225	95744	96291
75°	78959	78860	78491
80°	66644	66456	67688
85°	59803	57704	61278



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1285.0	2.2
10°-20°	3756.3	6.3
20°-30°	6545.1	11.0
30°-40°	9393.8	15.7
40°-50°	11712.5	19.6
50°-60°	11841.3	19.8
60°-70°	8144.5	13.6
70°-80°	4142.9	6.9
80°-90°	1765.1	3.0
90°-100°	705.6	1.2
100°-110°	302.6	0.5
110°-120°	34.0	0.1
120°-130°	15.8	0.0
130°-140°	17.5	0.0
140°-150°	14.7	0.0
150°-160°	8.1	0.0
160°-170°	4.8	0.0
170°-180°	1.6	0.0
0°-30°	11586.4	19.4
0°-40°	20980.2	35.1
0°-60°	44534.0	74.6
0°-90°	58586.5	98.1
90°-120°	1042.3	1.7
90°-150°	1090.2	1.8
90°-180°	1105.0	1.9
0°-180°	59691.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12737	12737	12737	12737	12737	
5°	13366	13314	13388	13355	13283	###
15°	13048	13013	12889	12979	12939	3770
25°	14289	14310	14368	14394	14184	6546
35°	15013	15040	15015	15028	14994	9407
45°	15013	15059	15084	15077	15177	11683
55°	13357	13286	13289	13259	13489	11923
65°	8226	8210	8184	8195	8240	8229
75°	3830	3792	3825	3791	3808	4179
85°	1598	1573	1542	1580	1637	1495
90°	899	859	803	856	902	518
95°	622	633	650	625	629	485
105°	274	283	282	280	277	301
115°	22	22	22	20	22	34
125°	18	18	18	18	18	16
135°	23	23	23	23	23	18
145°	24	24	24	24	24	15
155°	17	17	17	17	17	8
165°	18	17	17	17	17	5
175°	17	17	17	17	17	2
180°	17	17	17	17	17	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	12737.4	12737.4	12737.4	12737.4	12737.4
2.5°	12655.0	12563.0	12600.0	12628.7	12580.9
5°	13365.6	13314.2	13388.3	13354.9	13283.2
7.5°	13917.4	13702.4	13712.0	13659.4	13510.1
10°	13894.7	13728.7	13706.0	13832.6	13863.6
12.5°	13321.4	13271.3	13303.5	13354.9	13336.9
15°	13047.9	13013.3	12889.1	12978.6	12939.2
17.5°	13157.8	13063.4	13030.0	13173.3	13148.2
20°	13581.8	13532.8	13603.3	13614.0	13469.5
22.5°	14230.3	14167.0	14275.7	14157.4	14036.8
25°	14288.8	14310.3	14367.6	14393.9	14183.7
27.5°	14125.2	14164.6	14101.3	14206.4	14034.4
30°	14201.6	14212.4	14155.0	14189.7	14125.2
32.5°	14479.9	14477.5	14420.2	14561.1	14533.6
35°	15012.6	15040.0	15015.0	15028.1	14993.5
37.5°	15576.3	15429.4	15440.1	15454.5	15477.2
40°	15226.3	15276.5	15209.6	15331.4	15321.9
42.5°	14949.3	15111.7	15061.5	15050.8	15071.1
45°	15012.6	15059.1	15084.2	15077.1	15177.4
47.5°	15167.8	15190.5	15202.5	15123.6	15166.6
50°	15182.2	15059.1	15127.2	15062.7	15136.8
52.5°	14397.5	14360.5	14294.8	14456.0	14416.6
55°	13357.2	13285.6	13289.2	13259.3	13488.6
57.5°	12417.3	12183.2	12248.9	12226.2	12266.8
60°	11096.4	10855.1	10865.9	10916.1	10992.5
62.5°	9696.7	9679.9	9545.0	9652.5	9713.4
65°	8226.5	8209.7	8183.5	8195.4	8239.6
67.5°	6962.9	6775.4	6813.6	6786.1	6831.5
70°	5725.6	5650.3	5638.4	5644.3	5670.6
72.5°	4795.2	4716.4	4725.9	4694.9	4737.9
75°	3830.2	3792.0	3825.4	3790.8	3807.5
77.5°	3104.0	3089.7	3098.1	3077.8	3100.4
80°	2516.4	2506.9	2509.3	2511.6	2555.8
82.5°	2008.8	1998.1	1961.1	2002.9	2020.8
85°	1598.0	1572.9	1541.9	1580.1	1637.4
87.5°	1258.8	1209.8	1187.2	1226.6	1264.8
90°	899.3	858.7	802.6	856.3	901.7
92.5°	726.1	735.7	710.6	721.4	742.9
95°	622.2	633.0	649.7	624.6	629.4
97.5°	558.9	560.1	560.1	558.9	561.3
100°	474.1	478.9	481.3	480.1	476.5
102.5°	395.3	398.9	389.3	392.9	390.5
105°	273.5	283.1	281.9	279.5	277.1
107.5°	178.0	178.0	174.4	178.0	185.1
110°	96.7	94.4	92.0	95.5	99.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	44.2	45.4	46.6	44.2	44.2
115°	21.5	21.5	21.5	20.3	21.5
117.5°	14.3	14.3	14.3	14.3	14.3
120°	14.3	14.3	14.3	14.3	15.5
122.5°	15.5	16.7	15.5	16.7	16.7
125°	17.9	17.9	17.9	17.9	17.9
127.5°	19.1	19.1	19.1	19.1	19.1
130°	20.3	20.3	20.3	20.3	20.3
132.5°	21.5	21.5	21.5	21.5	21.5
135°	22.7	22.7	22.7	22.7	22.7
137.5°	23.9	23.9	23.9	23.9	23.9
140°	25.1	23.9	23.9	25.1	23.9
142.5°	25.1	23.9	23.9	25.1	23.9
145°	23.9	23.9	23.9	23.9	23.9
147.5°	22.7	22.7	22.7	22.7	21.5
150°	20.3	20.3	20.3	20.3	20.3
152.5°	19.1	17.9	17.9	17.9	17.9
155°	16.7	16.7	16.7	16.7	16.7
157.5°	16.7	16.7	16.7	16.7	16.7
160°	17.9	16.7	16.7	16.7	16.7
162.5°	17.9	16.7	16.7	16.7	16.7
165°	17.9	16.7	16.7	16.7	16.7
167.5°	17.9	16.7	16.7	16.7	16.7
170°	17.9	16.7	16.7	16.7	16.7
172.5°	16.7	16.7	16.7	16.7	16.7
175°	16.7	16.7	16.7	16.7	16.7
177.5°	16.7	16.7	16.7	16.7	17.9
180°	16.7	16.7	16.7	16.7	16.7

(END OF REPORT)