

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: P381642

Luminaire Tested: **BMK-50-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: P381642
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-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: 50614.0 lumens
Efficiency: N/A
Efficacy: 152.2 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

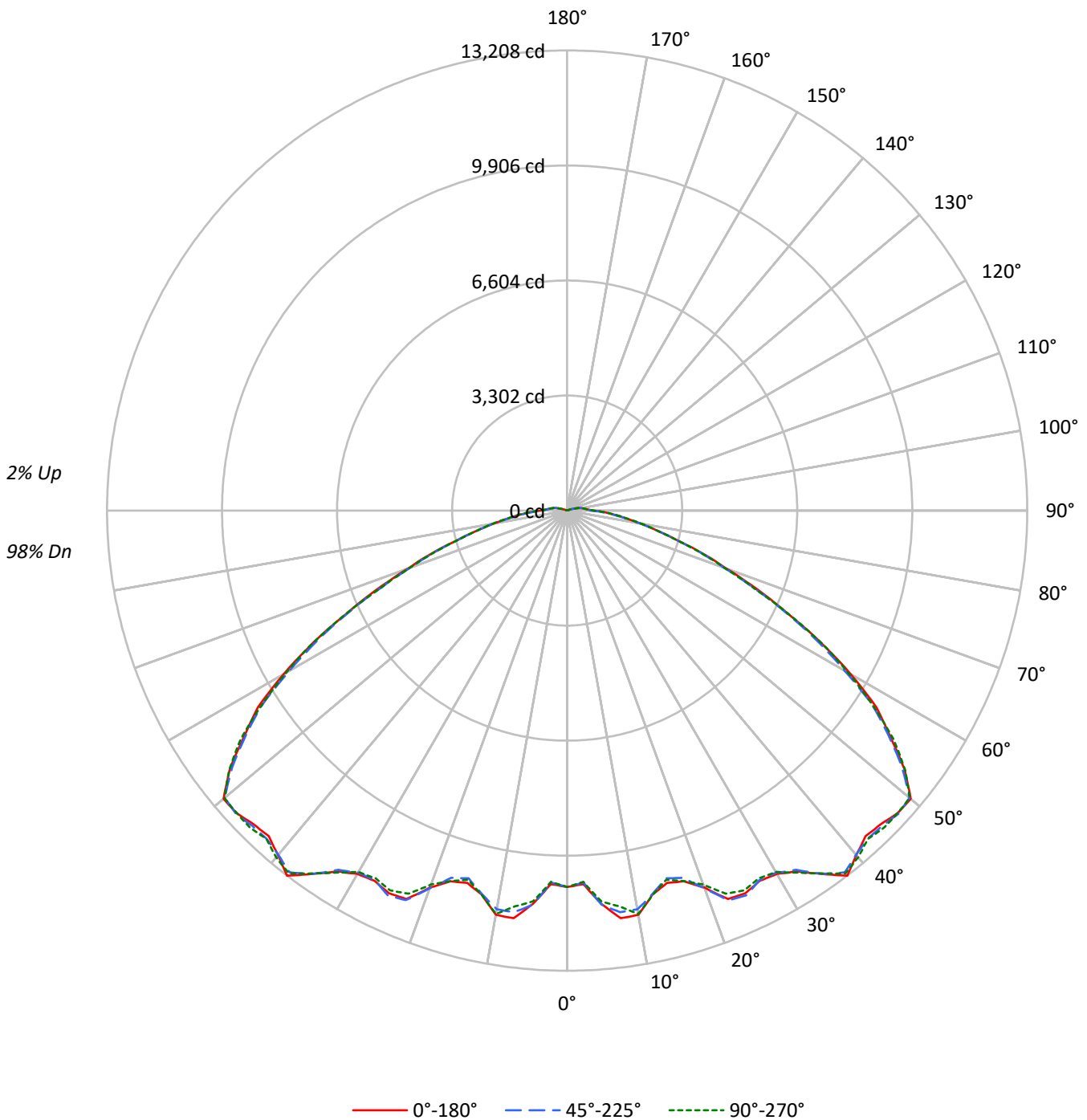
Input Watts (W): 332.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	83303	83303	83303
5°	86838	86985	86303
10°	90371	89144	90169
15°	85605	84563	84892
20°	90589	90732	89840
25°	97672	98210	96954
30°	100332	100002	99791
35°	110612	110629	110471
40°	118156	118026	118898
45°	124041	124633	125403
50°	135229	134739	134824
55°	130115	129452	131395
60°	120270	117771	119143
65°	101353	100824	101515
70°	82440	81183	81649
75°	66951	66868	66555
80°	56509	56350	57396
85°	50709	48928	51959



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1089.6	2.2
10°-20°	3185.0	6.3
20°-30°	5549.8	11.0
30°-40°	7965.3	15.7
40°-50°	9931.4	19.6
50°-60°	10040.6	19.8
60°-70°	6905.9	13.6
70°-80°	3512.9	6.9
80°-90°	1496.7	3.0
90°-100°	598.4	1.2
100°-110°	256.6	0.5
110°-120°	28.9	0.1
120°-130°	13.4	0.0
130°-140°	14.8	0.0
140°-150°	12.4	0.0
150°-160°	6.9	0.0
160°-170°	4.1	0.0
170°-180°	1.4	0.0
0°-30°	9824.4	19.4
0°-40°	17789.7	35.1
0°-60°	37761.6	74.6
0°-90°	49677.1	98.1
90°-120°	883.8	1.7
90°-150°	924.5	1.8
90°-180°	937.0	1.9
0°-180°	50614.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10800	10800	10800	10800	10800	
5°	11333	11290	11352	11324	11263	###
15°	11064	11034	10929	11005	10972	3197
25°	12116	12134	12183	12205	12027	5551
35°	12730	12753	12732	12743	12713	7977
45°	12730	12769	12790	12784	12869	9906
55°	11326	11265	11268	11243	11437	10110
65°	6975	6961	6939	6949	6987	6977
75°	3248	3215	3244	3214	3228	3544
85°	1355	1334	1307	1340	1388	1268
90°	763	728	680	726	765	440
95°	528	537	551	530	534	411
105°	232	240	239	237	235	255
115°	18	18	18	17	18	29
125°	15	15	15	15	15	13
135°	19	19	19	19	19	15
145°	20	20	20	20	20	13
155°	14	14	14	14	14	7
165°	15	14	14	14	14	4
175°	14	14	14	14	14	1
180°	14	14	14	14	14	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	10800.4	10800.4	10800.4	10800.4	10800.4
2.5°	10730.5	10652.5	10683.9	10708.2	10667.7
5°	11333.1	11289.5	11352.3	11324.0	11263.2
7.5°	11800.9	11618.7	11626.8	11582.2	11455.6
10°	11781.7	11640.9	11621.7	11729.0	11755.4
12.5°	11295.6	11253.1	11280.4	11324.0	11308.8
15°	11063.7	11034.3	10929.0	11005.0	10971.5
17.5°	11156.9	11076.9	11048.5	11170.0	11148.8
20°	11516.4	11474.9	11534.6	11543.7	11421.2
22.5°	12066.3	12012.6	12104.7	12004.5	11902.2
25°	12115.9	12134.1	12182.7	12205.0	12026.8
27.5°	11977.1	12010.6	11956.9	12046.0	11900.2
30°	12042.0	12051.1	12002.5	12031.8	11977.1
32.5°	12277.9	12275.9	12227.3	12346.8	12323.5
35°	12729.6	12752.9	12731.6	12742.7	12713.4
37.5°	13207.6	13083.0	13092.1	13104.3	13123.5
40°	12910.9	12953.4	12896.7	13000.0	12991.9
42.5°	12675.9	12813.6	12771.1	12762.0	12779.2
45°	12729.6	12769.1	12790.3	12784.3	12869.3
47.5°	12861.2	12880.5	12890.6	12823.8	12860.2
50°	12873.4	12769.1	12826.8	12772.1	12834.9
52.5°	12208.0	12176.6	12120.9	12257.7	12224.2
55°	11326.0	11265.2	11268.3	11242.9	11437.4
57.5°	10529.0	10330.5	10386.2	10367.0	10401.4
60°	9409.0	9204.4	9213.5	9256.0	9320.8
62.5°	8222.1	8207.9	8093.5	8184.6	8236.3
65°	6975.4	6961.3	6939.0	6949.1	6986.6
67.5°	5904.0	5745.0	5777.4	5754.1	5792.6
70°	4854.9	4791.1	4780.9	4786.0	4808.3
72.5°	4066.0	3999.1	4007.2	3980.9	4017.4
75°	3247.7	3215.3	3243.7	3214.3	3228.5
77.5°	2632.0	2619.8	2626.9	2609.7	2629.0
80°	2133.7	2125.6	2127.7	2129.7	2167.2
82.5°	1703.4	1694.2	1662.8	1698.3	1713.5
85°	1355.0	1333.7	1307.4	1339.8	1388.4
87.5°	1067.4	1025.9	1006.6	1040.0	1072.4
90°	762.6	728.1	680.5	726.1	764.6
92.5°	615.7	623.8	602.6	611.7	629.9
95°	527.6	536.7	550.9	529.6	533.7
97.5°	473.9	475.0	475.0	473.9	476.0
100°	402.0	406.1	408.1	407.1	404.1
102.5°	335.2	338.2	330.1	333.2	331.2
105°	231.9	240.0	239.0	237.0	234.9
107.5°	150.9	150.9	147.9	150.9	157.0
110°	82.0	80.0	78.0	81.0	84.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	37.5	38.5	39.5	37.5	37.5
115°	18.2	18.2	18.2	17.2	18.2
117.5°	12.2	12.2	12.2	12.2	12.2
120°	12.2	12.2	12.2	12.2	13.2
122.5°	13.2	14.2	13.2	14.2	14.2
125°	15.2	15.2	15.2	15.2	15.2
127.5°	16.2	16.2	16.2	16.2	16.2
130°	17.2	17.2	17.2	17.2	17.2
132.5°	18.2	18.2	18.2	18.2	18.2
135°	19.2	19.2	19.2	19.2	19.2
137.5°	20.3	20.3	20.3	20.3	20.3
140°	21.3	20.3	20.3	21.3	20.3
142.5°	21.3	20.3	20.3	21.3	20.3
145°	20.3	20.3	20.3	20.3	20.3
147.5°	19.2	19.2	19.2	19.2	18.2
150°	17.2	17.2	17.2	17.2	17.2
152.5°	16.2	15.2	15.2	15.2	15.2
155°	14.2	14.2	14.2	14.2	14.2
157.5°	14.2	14.2	14.2	14.2	14.2
160°	15.2	14.2	14.2	14.2	14.2
162.5°	15.2	14.2	14.2	14.2	14.2
165°	15.2	14.2	14.2	14.2	14.2
167.5°	15.2	14.2	14.2	14.2	14.2
170°	15.2	14.2	14.2	14.2	14.2
172.5°	14.2	14.2	14.2	14.2	14.2
175°	14.2	14.2	14.2	14.2	14.2
177.5°	14.2	14.2	14.2	14.2	15.2
180°	14.2	14.2	14.2	14.2	14.2

(END OF REPORT)