

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: P294505

Luminaire Tested: **BMK-24-WCL-UNV-L850-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: P294505
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-24-WCL-UNV-L850-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE CLEAR LENS
Light Source: (528) 80 CRI 5000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

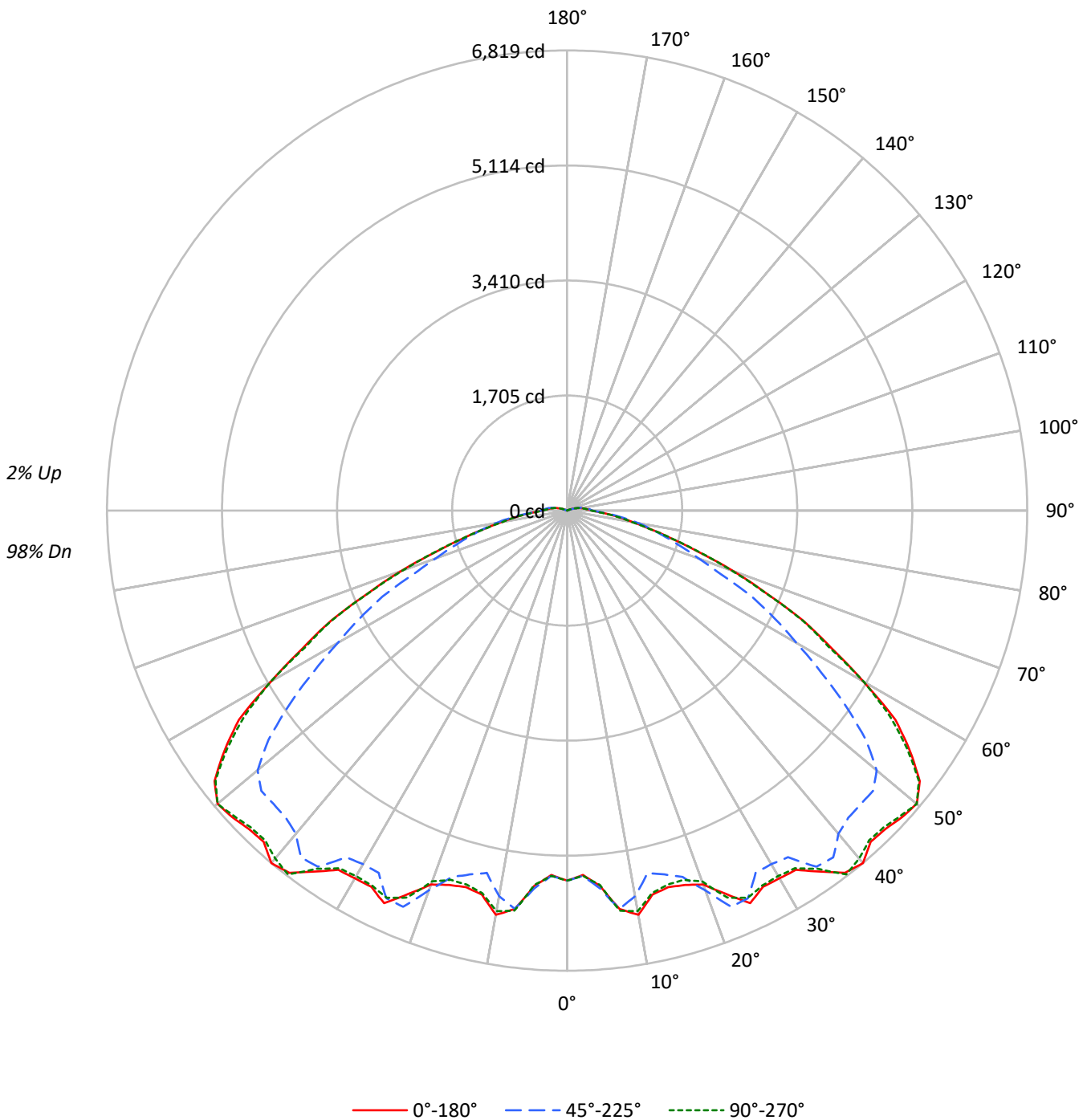
Lumens per Lamp: N/A
Luminaire Lumens: 25221.0 lumens
Efficiency: N/A
Efficacy: 162.2 lumens/watt
Spacing Criteria (0/90/45): 1.8 / 1.79 / 1.79
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

Input Watts (W): 155.5
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°	42277	42277	42277
5°	42742	43052	42634
10°	46628	44476	46210
15°	44677	43177	44380
20°	46357	47087	45960
25°	51723	51072	51024
30°	52398	50363	52079
35°	56699	55963	56261
40°	62377	57204	61564
45°	64980	59905	64627
50°	70984	62861	71005
55°	71183	57846	70627
60°	64776	50170	64829
65°	56090	43887	55943
70°	44363	35176	43919
75°	33048	31008	33256
80°	26203	28395	25613
85°	22970	24257	22368



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	550.8	2.2
10°-20°	1620.2	6.4
20°-30°	2833.1	11.2
30°-40°	4034.4	16.0
40°-50°	4993.5	19.8
50°-60°	4967.2	19.7
60°-70°	3366.8	13.3
70°-80°	1669.5	6.6
80°-90°	696.4	2.8
90°-100°	327.7	1.3
100°-110°	142.4	0.6
110°-120°	18.5	0.1
120°-130°	0.5	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°	5004.2	19.8
0°-40°	9038.5	35.8
0°-60°	18999.2	75.3
0°-90°	24731.9	98.1
90°-120°	488.6	1.9
90°-150°	489.1	1.9
90°-180°	489.0	1.9
0°-180°	25221.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5484	5484	5484	5484	5484	
5°	5581	5559	5621	5583	5567	554
15°	5777	5569	5583	5579	5738	1657
25°	6419	6036	6338	6011	6332	2892
35°	6528	6548	6444	6565	6478	4117
45°	6672	6468	6151	6444	6635	5198
55°	6199	5627	5038	5585	6151	5474
65°	3862	3357	3022	3371	3852	3782
75°	1604	1501	1505	1517	1614	1768
85°	614	598	648	596	598	579
90°	368	392	374	388	362	208
95°	281	301	313	297	279	216
105°	135	129	125	131	135	143
115°	10	12	14	12	10	18
125°	0	0	0	0	0	0
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: P294505

CATALOG NUMBER: BMK-24-WCL-UNV-L850-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5484.0	5484.0	5484.0	5484.0	5484.0
2.5°	5403.2	5425.4	5417.4	5409.3	5417.4
5°	5581.0	5558.8	5621.4	5583.0	5566.8
7.5°	5954.7	5900.1	5950.6	5902.1	5978.9
10°	6081.9	5991.0	5801.2	5968.8	6027.4
12.5°	5829.4	5740.6	5500.2	5756.7	5805.2
15°	5776.9	5568.9	5583.0	5579.0	5738.5
17.5°	5815.3	5566.8	5692.1	5570.9	5738.5
20°	5896.1	5785.0	5989.0	5789.0	5845.6
22.5°	6150.6	6053.6	6354.6	6049.6	6207.2
25°	6419.2	6035.5	6338.4	6011.2	6332.4
27.5°	6285.9	6071.8	6051.6	6047.6	6263.7
30°	6292.0	6138.5	6047.6	6154.6	6253.6
32.5°	6312.2	6261.7	6092.0	6283.9	6283.9
35°	6528.3	6548.5	6443.5	6564.7	6477.8
37.5°	6764.6	6546.5	6477.8	6552.6	6797.0
40°	6819.2	6435.4	6253.6	6427.3	6730.3
42.5°	6657.6	6485.9	6170.8	6465.7	6625.3
45°	6671.7	6467.7	6150.6	6443.5	6635.4
47.5°	6728.3	6590.9	6148.6	6570.7	6698.0
50°	6760.6	6346.5	5987.0	6344.5	6762.6
52.5°	6586.9	6043.5	5576.9	6035.5	6566.7
55°	6199.1	5627.4	5037.6	5585.0	6150.6
57.5°	5766.8	5148.7	4464.0	5114.4	5673.9
60°	5069.9	4548.8	3926.7	4540.7	5074.0
62.5°	4415.5	4053.9	3472.2	4041.8	4369.0
65°	3862.0	3357.1	3021.8	3371.2	3851.9
67.5°	3183.4	2791.5	2462.3	2793.5	3165.2
70°	2613.7	2339.0	2072.4	2320.9	2587.5
72.5°	2050.2	1894.7	1765.4	1888.6	2056.3
75°	1603.8	1500.8	1504.8	1516.9	1613.9
77.5°	1254.4	1201.8	1282.6	1207.9	1244.3
80°	989.8	961.5	1072.6	961.5	967.5
82.5°	787.8	761.5	850.4	763.5	785.7
85°	614.0	597.9	648.4	595.9	597.9
87.5°	460.5	468.6	474.7	470.6	448.4
90°	367.6	391.9	373.7	387.8	361.6
92.5°	323.2	343.4	343.4	349.4	315.1
95°	280.8	301.0	313.1	296.9	278.7
97.5°	244.4	264.6	278.7	264.6	244.4
100°	210.1	224.2	238.3	220.2	206.0
102.5°	175.7	181.8	185.8	181.8	173.7
105°	135.3	129.3	125.2	131.3	135.3
107.5°	94.9	88.9	74.7	88.9	99.0
110°	56.6	52.5	44.4	52.5	60.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	28.3	26.3	26.3	28.3	30.3
115°	10.1	12.1	14.1	12.1	10.1
117.5°	4.0	6.1	6.1	6.1	4.0
120°	4.0	4.0	4.0	4.0	4.0
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)