

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: P294475

Luminaire Tested: **BMK-30-WFL-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: P294475  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-103-3)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: BMK-30-WFL-UNV-L850-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH WIDE FROSTED 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: 30249.0 lumens  
Efficiency: N/A  
Efficacy: 150.4 lumens/watt  
Spacing Criteria (0/90/45): 1.7 / 1.7 / 1.72  
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')  
CIE Type: Direct

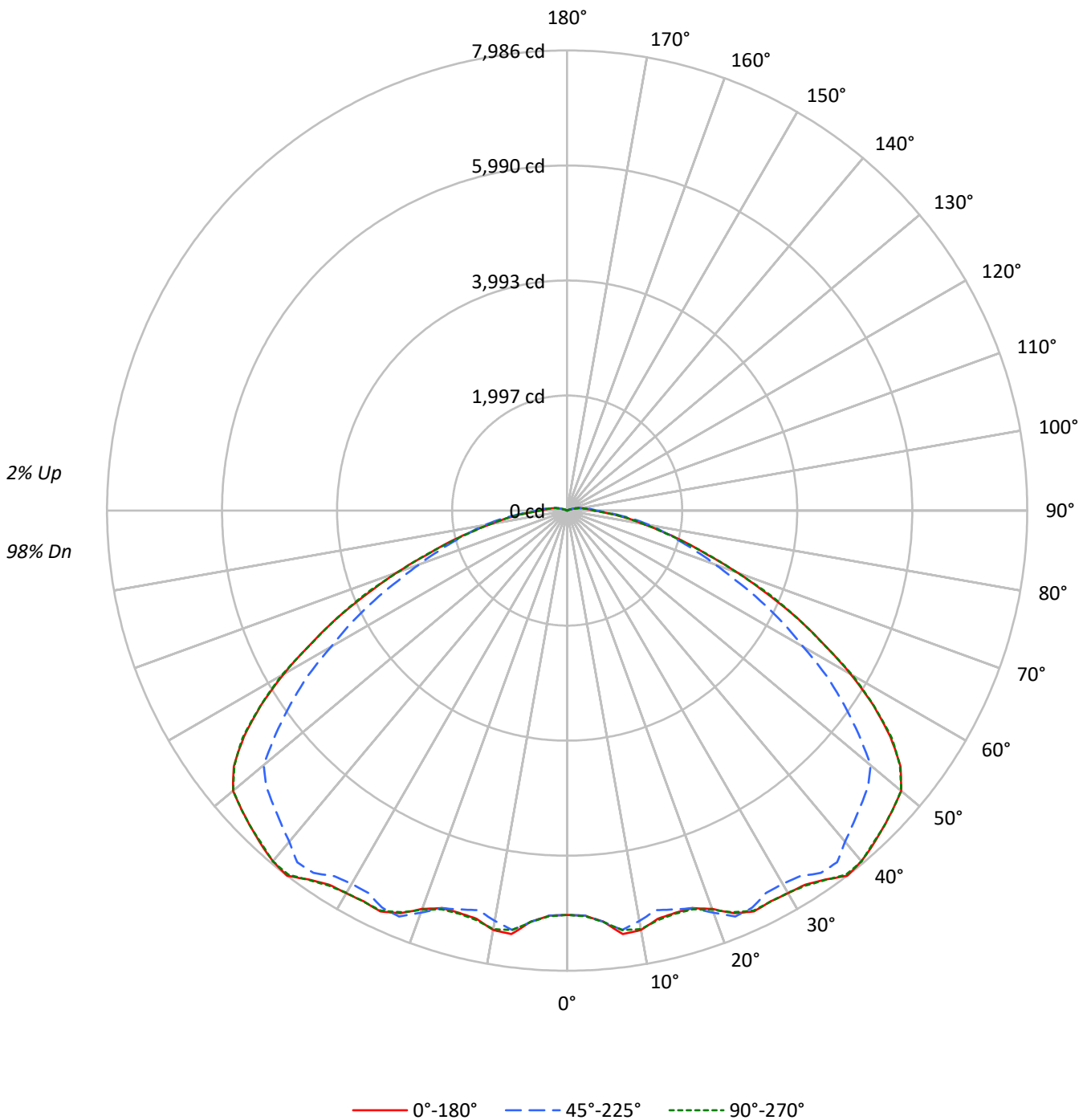
Input Watts (W): 201.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	102	97	93	104	100	95	92	95	91	88	91	88	85	87	84	82	80
2	97	88	81	75	94	86	79	74	82	76	72	78	74	70	75	71	68	65
3	88	77	68	61	85	75	67	60	71	65	59	68	62	58	65	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	43	56	48	42	53	47	41	51	45	41	38
6	67	53	44	37	65	52	43	37	50	42	36	48	41	36	46	40	35	33
7	62	48	38	32	60	47	38	32	45	37	31	43	36	31	42	35	31	29
8	57	43	34	28	56	42	34	28	41	33	28	39	32	27	38	32	27	25
9	53	39	31	25	52	39	30	25	37	30	25	36	29	24	35	29	24	22
10	50	36	28	22	48	35	28	22	34	27	22	33	27	22	32	26	22	20

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	54092	54092	54092
5°	54823	54861	54855
10°	56664	55438	56530
15°	55896	55419	56006
20°	57842	58386	57953
25°	61831	61267	61710
30°	63849	62280	63780
35°	67893	66684	67958
40°	72688	68638	72673
45°	75633	70290	75641
50°	79468	72166	79424
55°	78657	67262	78963
60°	72679	60501	73084
65°	63893	53721	63832
70°	53356	46380	53003
75°	43660	41426	42749
80°	35517	38299	35959
85°	31039	33752	31507



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	691.8	2.3
10°-20°	2047.7	6.8
20°-30°	3483.1	11.5
30°-40°	4850.9	16.0
40°-50°	5804.5	19.2
50°-60°	5644.5	18.7
60°-70°	4004.4	13.2
70°-80°	2180.7	7.2
80°-90°	955.8	3.2
90°-100°	397.1	1.3
100°-110°	163.0	0.5
110°-120°	25.1	0.1
120°-130°	0.6	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°	6222.6	20.6
0°-40°	11073.5	36.6
0°-60°	22522.4	74.5
0°-90°	29663.2	98.1
90°-120°	585.2	1.9
90°-150°	585.8	1.9
90°-180°	586.0	1.9
0°-180°	30249.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7017	7017	7017	7017	7017	
5°	7158	7147	7163	7149	7163	695
15°	7228	7136	7166	7123	7242	2061
25°	7674	7475	7604	7483	7659	3521
35°	7817	7823	7678	7798	7825	4921
45°	7765	7513	7217	7522	7766	6008
55°	6850	6336	5858	6349	6877	6058
65°	4399	4017	3699	4022	4395	4343
75°	2119	1984	2010	1991	2075	2271
85°	830	828	902	835	842	784
90°	463	499	510	498	469	265
95°	338	356	381	360	343	257
105°	148	149	147	150	148	160
115°	13	18	22	18	14	23
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



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CATALOG NUMBER: BMK-30-WFL-UNV-L850-CD-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7016.7	7016.7	7016.7	7016.7	7016.7
2.5°	7034.2	7030.0	7035.0	7036.7	7044.2
5°	7158.4	7146.7	7163.4	7149.2	7162.6
7.5°	7412.7	7354.4	7340.2	7336.0	7342.7
10°	7391.0	7349.4	7231.0	7347.7	7373.5
12.5°	7256.8	7213.4	7102.5	7209.3	7281.0
15°	7227.6	7135.9	7165.9	7122.6	7241.8
17.5°	7231.8	7150.1	7233.5	7143.4	7254.3
20°	7356.9	7304.3	7426.1	7298.5	7371.0
22.5°	7565.3	7473.6	7623.7	7445.2	7545.3
25°	7673.7	7475.3	7603.7	7482.8	7658.7
27.5°	7645.4	7513.6	7477.8	7512.8	7649.5
30°	7667.0	7592.8	7478.6	7580.3	7658.7
32.5°	7695.4	7651.2	7522.0	7646.2	7712.1
35°	7817.1	7823.0	7677.9	7798.0	7824.6
37.5°	7985.6	7801.3	7693.7	7788.8	7958.9
40°	7946.4	7698.7	7503.6	7697.9	7944.7
42.5°	7859.7	7631.2	7353.5	7634.5	7845.5
45°	7765.4	7512.8	7216.8	7522.0	7766.3
47.5°	7669.5	7467.8	7082.5	7458.6	7669.5
50°	7568.7	7208.4	6873.2	7210.1	7564.5
52.5°	7294.3	6829.9	6374.6	6829.9	7281.0
55°	6849.9	6336.3	5857.6	6348.8	6876.6
57.5°	6307.9	5855.1	5334.8	5849.3	6314.6
60°	5688.4	5222.3	4735.3	5255.6	5720.1
62.5°	5015.5	4683.6	4222.5	4654.4	5011.3
65°	4399.3	4017.4	3698.9	4021.5	4395.1
67.5°	3733.9	3432.0	3170.2	3427.0	3793.9
70°	3143.5	2891.7	2732.5	2891.7	3122.7
72.5°	2559.0	2431.4	2351.4	2426.4	2587.4
75°	2118.8	1984.5	2010.4	1991.2	2074.6
77.5°	1691.8	1625.1	1721.0	1626.0	1681.0
80°	1341.6	1327.5	1446.7	1323.3	1358.3
82.5°	1075.6	1059.8	1172.4	1054.8	1087.3
85°	829.7	828.0	902.2	834.7	842.2
87.5°	612.9	634.5	668.7	637.9	613.7
90°	462.8	498.6	509.5	497.8	468.6
92.5°	396.1	420.2	436.1	419.4	402.7
95°	338.5	356.0	381.1	360.2	342.7
97.5°	286.8	303.5	321.0	303.5	289.3
100°	238.5	250.1	266.8	251.8	241.0
102.5°	196.8	199.3	207.6	202.6	195.9
105°	147.6	149.3	146.8	150.1	148.4
107.5°	106.7	105.1	98.4	107.6	105.9
110°	66.7	66.7	65.0	67.5	66.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	35.0	37.5	40.9	37.5	36.7
115°	13.3	18.3	21.7	17.5	14.2
117.5°	5.8	8.3	9.2	8.3	5.8
120°	5.0	5.8	5.0	5.0	5.0
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)