

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: P294501

Luminaire Tested: **BMK-24-WCL-UNV-L740-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: P294501
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-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE CLEAR LENS
Light Source: (528) 70 CRI 4000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26953.0 lumens
Efficiency: N/A
Efficacy: 173.3 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

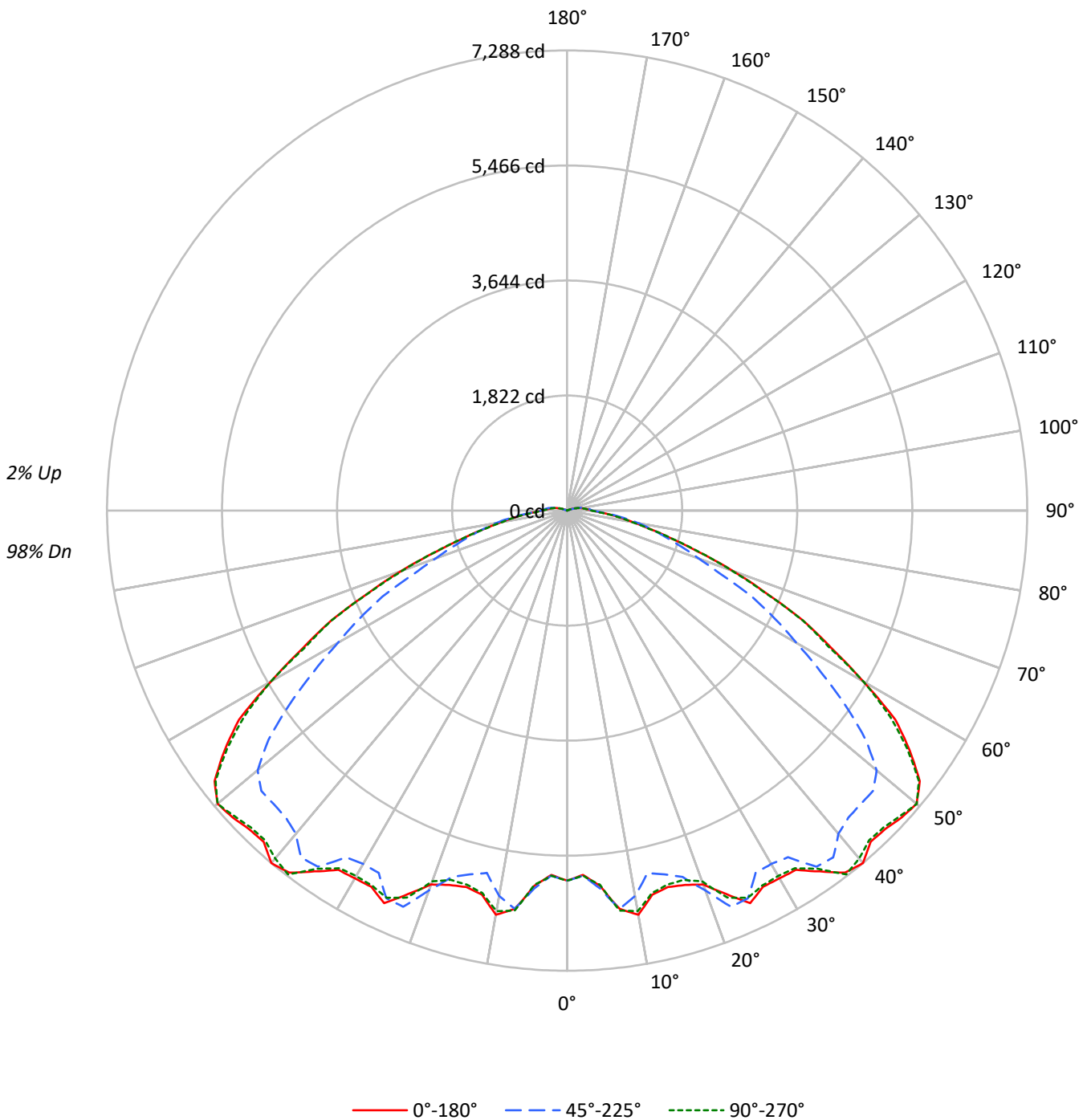
Input Watts (W): 155.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P294501

CATALOG NUMBER: BMK-24-WCL-UNV-L740-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P294501

CATALOG NUMBER: BMK-24-WCL-UNV-L740-CD-U

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°	45180	45180	45180
5°	45677	46008	45562
10°	49830	47529	49383
15°	47745	46142	47428
20°	49540	50321	49116
25°	55276	54579	54527
30°	55997	53822	55655
35°	60593	59806	60125
40°	66661	61132	65792
45°	69443	64019	69064
50°	75859	67177	75881
55°	76072	61819	75477
60°	69225	53615	69280
65°	59943	46901	59786
70°	47410	37591	46935
75°	35317	33139	35539
80°	28001	30344	27374
85°	24549	25922	23902



TEST NUMBER: P294501

CATALOG NUMBER: BMK-24-WCL-UNV-L740-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	588.6	2.2
10°-20°	1731.5	6.4
20°-30°	3027.7	11.2
30°-40°	4311.4	16.0
40°-50°	5336.4	19.8
50°-60°	5308.3	19.7
60°-70°	3598.0	13.3
70°-80°	1784.2	6.6
80°-90°	744.2	2.8
90°-100°	350.2	1.3
100°-110°	152.2	0.6
110°-120°	19.7	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°	5347.8	19.8
0°-40°	9659.3	35.8
0°-60°	20303.9	75.3
0°-90°	26430.3	98.1
90°-120°	522.2	1.9
90°-150°	522.7	1.9
90°-180°	523.0	1.9
0°-180°	26953.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5861	5861	5861	5861	5861	
5°	5964	5940	6007	5966	5949	592
15°	6174	5951	5966	5962	6133	1771
25°	6860	6450	6774	6424	6767	3090
35°	6977	6998	6886	7016	6923	4400
45°	7130	6912	6573	6886	7091	5555
55°	6625	6014	5384	5969	6573	5850
65°	4127	3588	3229	3603	4116	4042
75°	1714	1604	1608	1621	1725	1890
85°	656	639	693	637	639	619
90°	393	419	399	414	386	222
95°	300	322	335	317	298	231
105°	145	138	134	140	145	153
115°	11	13	15	13	11	20
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



TEST NUMBER: P294501

CATALOG NUMBER: BMK-24-WCL-UNV-L740-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5860.6	5860.6	5860.6	5860.6	5860.6
2.5°	5774.3	5798.0	5789.4	5780.8	5789.4
5°	5964.2	5940.5	6007.4	5966.4	5949.1
7.5°	6363.6	6305.3	6359.3	6307.5	6389.5
10°	6499.6	6402.4	6199.5	6378.7	6441.3
12.5°	6229.8	6134.8	5877.9	6152.0	6203.8
15°	6173.6	5951.3	5966.4	5962.1	6132.6
17.5°	6214.6	5949.1	6083.0	5953.5	6132.6
20°	6301.0	6182.3	6400.3	6186.6	6247.0
22.5°	6573.0	6469.4	6791.0	6465.0	6633.4
25°	6860.1	6449.9	6773.7	6424.0	6767.2
27.5°	6717.6	6488.8	6467.2	6462.9	6693.9
30°	6724.1	6560.0	6462.9	6577.3	6683.1
32.5°	6745.7	6691.7	6510.4	6715.4	6715.4
35°	6976.6	6998.2	6886.0	7015.5	6922.7
37.5°	7229.2	6996.1	6922.7	7002.5	7263.7
40°	7287.5	6877.3	6683.1	6868.7	7192.5
42.5°	7114.8	6931.3	6594.6	6909.7	7080.2
45°	7129.9	6911.9	6573.0	6886.0	7091.0
47.5°	7190.3	7043.5	6570.8	7022.0	7158.0
50°	7224.9	6782.4	6398.1	6780.2	7227.0
52.5°	7039.2	6458.6	5959.9	6449.9	7017.6
55°	6624.8	6013.9	5383.6	5968.6	6573.0
57.5°	6162.8	5502.3	4770.5	5465.6	6063.5
60°	5418.1	4861.2	4196.3	4852.6	5422.4
62.5°	4718.7	4332.3	3710.7	4319.4	4669.1
65°	4127.3	3587.6	3229.3	3602.7	4116.5
67.5°	3402.0	2983.2	2631.3	2985.4	3382.5
70°	2793.2	2499.7	2214.7	2480.2	2765.2
72.5°	2191.0	2024.8	1886.6	2018.3	2197.5
75°	1713.9	1603.8	1608.2	1621.1	1724.7
77.5°	1340.5	1284.4	1370.7	1290.8	1329.7
80°	1057.7	1027.5	1146.2	1027.5	1034.0
82.5°	841.9	813.8	908.8	816.0	839.7
85°	656.2	638.9	692.9	636.8	638.9
87.5°	492.2	500.8	507.3	503.0	479.2
90°	392.9	418.8	399.3	414.5	386.4
92.5°	345.4	367.0	367.0	373.4	336.7
95°	300.0	321.6	334.6	317.3	297.9
97.5°	261.2	282.8	297.9	282.8	261.2
100°	224.5	239.6	254.7	235.3	220.2
102.5°	187.8	194.3	198.6	194.3	185.6
105°	144.6	138.2	133.8	140.3	144.6
107.5°	101.5	95.0	79.9	95.0	105.8
110°	60.4	56.1	47.5	56.1	64.8



TEST NUMBER: P294501

CATALOG NUMBER: BMK-24-WCL-UNV-L740-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	30.2	28.1	28.1	30.2	32.4
115°	10.8	13.0	15.1	13.0	10.8
117.5°	4.3	6.5	6.5	6.5	4.3
120°	4.3	4.3	4.3	4.3	4.3
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)