

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: P294477

Luminaire Tested: **BMK-36-WFL-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: P294477
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-36-WFL-UNV-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE FROSTED 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: 38502.0 lumens
Efficiency: N/A
Efficacy: 158.4 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

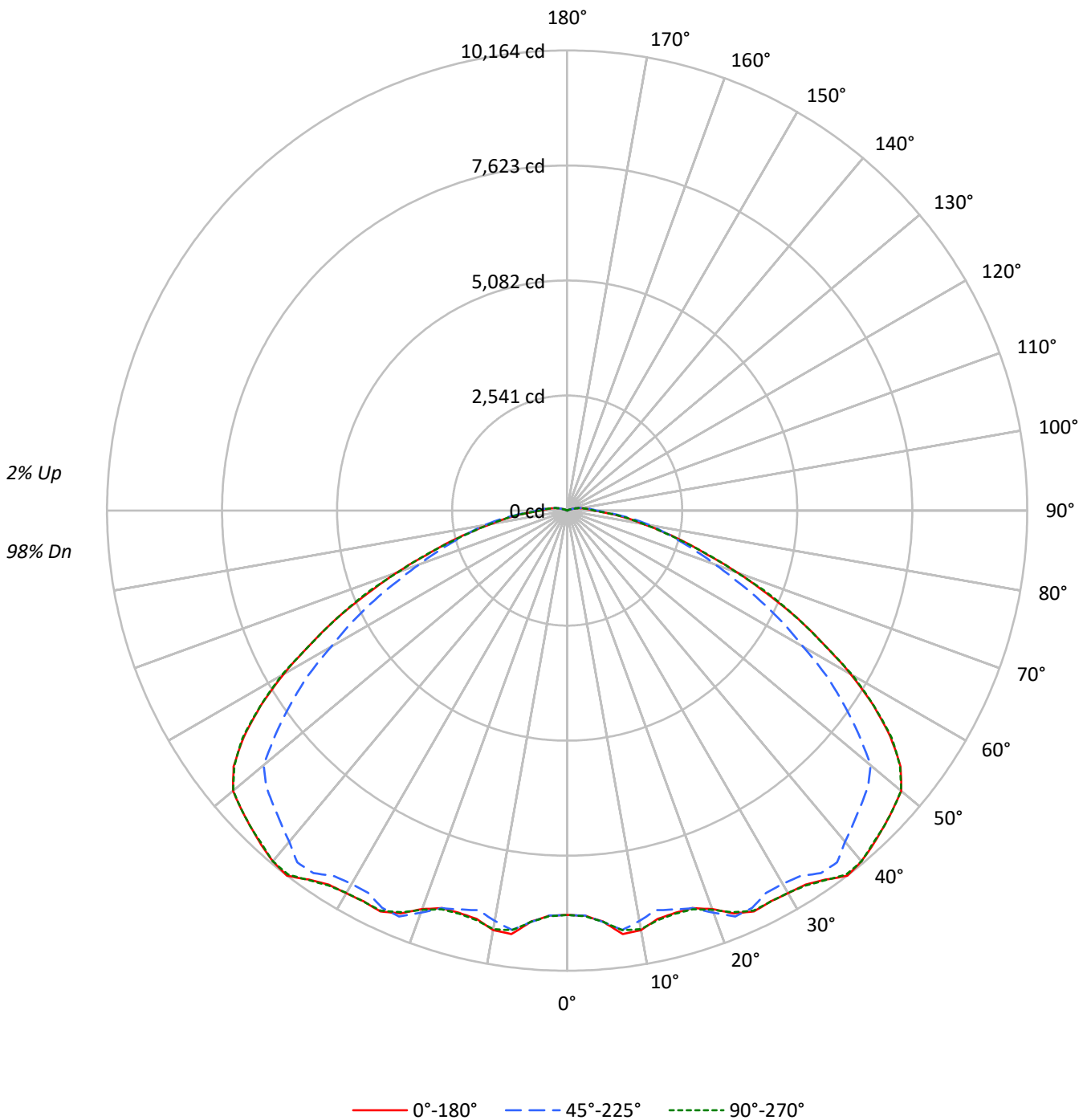
Input Watts (W): 243
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P294477

CATALOG NUMBER: BMK-36-WFL-UNV-L740-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P294477

CATALOG NUMBER: BMK-36-WFL-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	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°	68851	68851	68851
5°	69781	69829	69822
10°	72125	70562	71954
15°	71147	70539	71286
20°	73623	74316	73765
25°	78701	77983	78547
30°	81270	79272	81182
35°	86416	84877	86500
40°	92520	87365	92500
45°	96268	89467	96279
50°	101149	91856	101093
55°	100117	85614	100506
60°	92508	77009	93023
65°	81326	68377	81247
70°	67914	59033	67464
75°	55570	52729	54412
80°	45209	48748	45770
85°	39505	42962	40100



TEST NUMBER: P294477

CATALOG NUMBER: BMK-36-WFL-UNV-L740-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	880.5	2.3
10°-20°	2606.4	6.8
20°-30°	4433.4	11.5
30°-40°	6174.4	16.0
40°-50°	7388.1	19.2
50°-60°	7184.5	18.7
60°-70°	5096.9	13.2
70°-80°	2775.6	7.2
80°-90°	1216.5	3.2
90°-100°	505.5	1.3
100°-110°	207.5	0.5
110°-120°	31.9	0.1
120°-130°	0.8	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°	7920.3	20.6
0°-40°	14094.7	36.6
0°-60°	28667.3	74.5
0°-90°	37756.3	98.1
90°-120°	744.9	1.9
90°-150°	745.7	1.9
90°-180°	746.0	1.9
0°-180°	38502.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8931	8931	8931	8931	8931	
5°	9112	9097	9118	9100	9117	885
15°	9200	9083	9121	9066	9218	2623
25°	9767	9515	9678	9524	9748	4481
35°	9950	9957	9773	9926	9960	6264
45°	9884	9562	9186	9574	9885	7647
55°	8719	8065	7456	8081	8753	7710
65°	5600	5114	4708	5119	5594	5527
75°	2697	2526	2559	2534	2641	2890
85°	1056	1054	1148	1062	1072	998
90°	589	635	648	634	596	337
95°	431	453	485	458	436	327
105°	188	190	187	191	189	204
115°	17	23	28	22	18	29
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: P294477

CATALOG NUMBER: BMK-36-WFL-UNV-L740-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8931.1	8931.1	8931.1	8931.1	8931.1
2.5°	8953.3	8948.0	8954.4	8956.5	8966.1
5°	9111.5	9096.6	9117.8	9099.8	9116.8
7.5°	9435.2	9360.9	9342.8	9337.5	9346.0
10°	9407.6	9354.5	9203.8	9352.4	9385.3
12.5°	9236.7	9181.5	9040.4	9176.2	9267.5
15°	9199.6	9082.8	9121.0	9065.8	9217.6
17.5°	9204.9	9100.9	9207.0	9092.4	9233.5
20°	9364.1	9297.2	9452.2	9289.8	9382.1
22.5°	9629.4	9512.7	9703.7	9476.6	9603.9
25°	9767.4	9514.8	9678.2	9524.3	9748.3
27.5°	9731.3	9563.6	9518.0	9562.5	9736.6
30°	9758.9	9664.4	9519.0	9648.5	9748.3
32.5°	9795.0	9738.7	9574.2	9732.4	9816.2
35°	9949.9	9957.4	9772.7	9925.5	9959.5
37.5°	10164.3	9929.8	9792.8	9913.8	10130.3
40°	10114.4	9799.2	9550.9	9798.2	10112.3
42.5°	10004.1	9713.2	9359.8	9717.5	9986.0
45°	9884.1	9562.5	9185.8	9574.2	9885.2
47.5°	9762.1	9505.2	9014.9	9493.6	9762.1
50°	9633.6	9175.2	8748.5	9177.3	9628.3
52.5°	9284.5	8693.3	8113.8	8693.3	9267.5
55°	8718.8	8065.0	7455.8	8080.9	8752.7
57.5°	8028.9	7452.6	6790.4	7445.2	8037.4
60°	7240.4	6647.1	6027.3	6689.5	7280.7
62.5°	6383.9	5961.5	5374.6	5924.3	6378.6
65°	5599.6	5113.5	4708.0	5118.8	5594.2
67.5°	4752.6	4368.4	4035.2	4362.0	4829.0
70°	4001.2	3680.7	3478.0	3680.7	3974.7
72.5°	3257.2	3094.8	2992.9	3088.5	3293.3
75°	2696.8	2526.0	2558.9	2534.4	2640.6
77.5°	2153.4	2068.5	2190.6	2069.6	2139.6
80°	1707.7	1689.6	1841.4	1684.3	1728.9
82.5°	1369.1	1348.9	1492.2	1342.6	1384.0
85°	1056.0	1053.9	1148.4	1062.4	1071.9
87.5°	780.1	807.7	851.2	811.9	781.1
90°	589.0	634.7	648.5	633.6	596.5
92.5°	504.1	534.9	555.1	533.8	512.6
95°	430.9	453.2	485.0	458.5	436.2
97.5°	365.1	386.3	408.6	386.3	368.3
100°	303.5	318.4	339.6	320.5	306.7
102.5°	250.5	253.7	264.3	257.9	249.4
105°	187.9	190.0	186.8	191.0	188.9
107.5°	135.8	133.7	125.2	136.9	134.8
110°	84.9	84.9	82.8	86.0	84.9



TEST NUMBER: P294477

CATALOG NUMBER: BMK-36-WFL-UNV-L740-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	44.6	47.8	52.0	47.8	46.7
115°	17.0	23.3	27.6	22.3	18.0
117.5°	7.4	10.6	11.7	10.6	7.4
120°	6.4	7.4	6.4	6.4	6.4
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)