

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: P294479

Luminaire Tested: **BMK-36-WFL-UNV-L835-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: P294479
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-L835-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH WIDE FROSTED LENS
Light Source: (528) 80 CRI 3500K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35347.0 lumens
Efficiency: N/A
Efficacy: 145.5 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

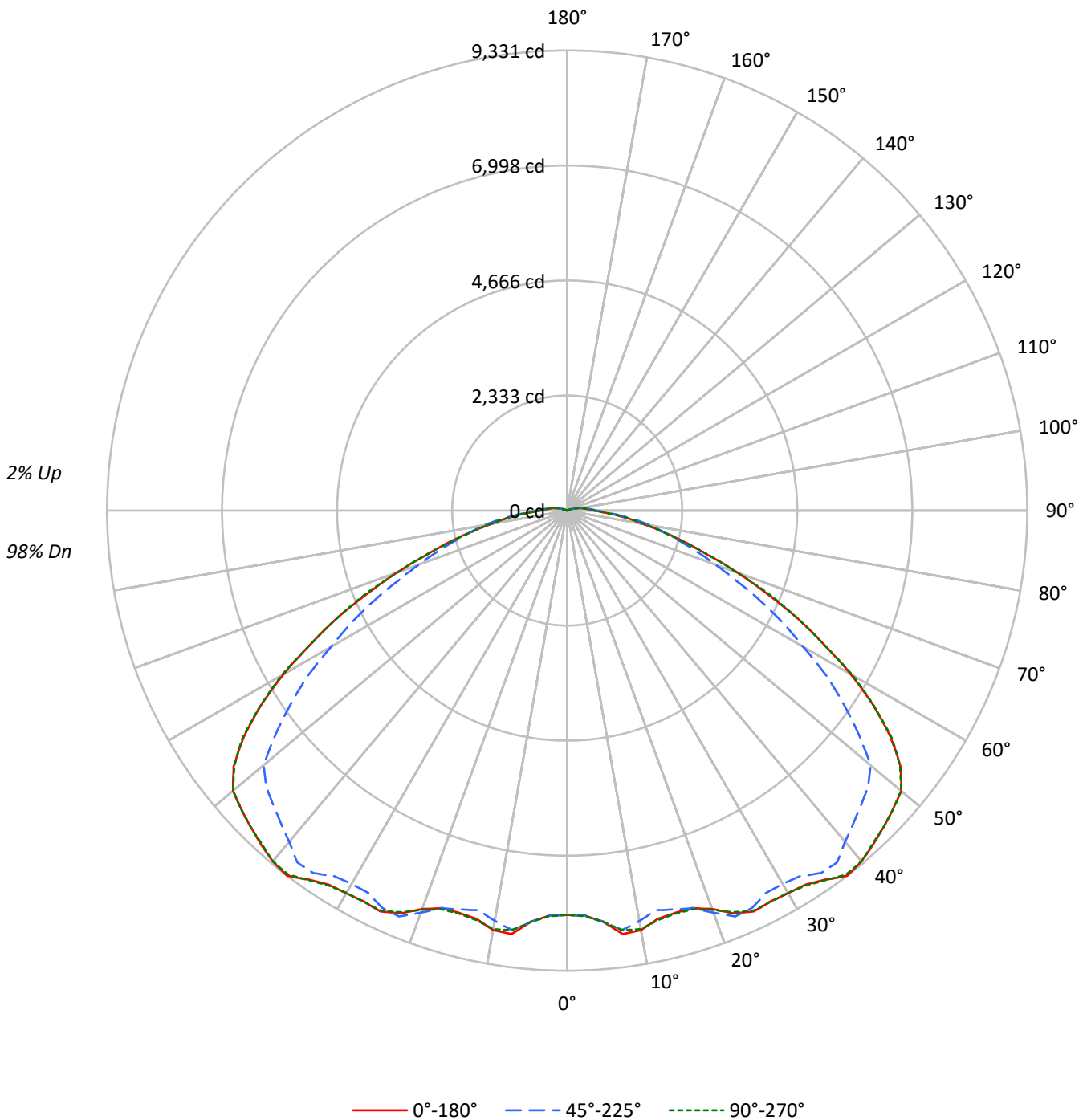
Input Watts (W): 243
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	63208	63208	63208
5°	64062	64107	64100
10°	66215	64780	66057
15°	65316	64759	65445
20°	67589	68226	67720
25°	72252	71593	72111
30°	74610	72776	74529
35°	79335	77922	79412
40°	84938	80205	84921
45°	88380	82136	88390
50°	92861	84329	92810
55°	91912	78599	92271
60°	84928	70698	85400
65°	74661	62774	74590
70°	62348	54196	61936
75°	51016	48408	49953
80°	41502	44753	42019
85°	36269	39442	36816



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	808.4	2.3
10°-20°	2392.8	6.8
20°-30°	4070.1	11.5
30°-40°	5668.4	16.0
40°-50°	6782.7	19.2
50°-60°	6595.7	18.7
60°-70°	4679.2	13.2
70°-80°	2548.2	7.2
80°-90°	1116.8	3.2
90°-100°	464.1	1.3
100°-110°	190.5	0.5
110°-120°	29.3	0.1
120°-130°	0.7	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°	7271.3	20.6
0°-40°	12939.7	36.6
0°-60°	26318.2	74.5
0°-90°	34662.4	98.1
90°-120°	683.9	1.9
90°-150°	684.6	1.9
90°-180°	685.0	1.9
0°-180°	35347.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8199	8199	8199	8199	8199	
5°	8365	8351	8371	8354	8370	813
15°	8446	8338	8374	8323	8462	2408
25°	8967	8735	8885	8744	8950	4114
35°	9135	9141	8972	9112	9143	5751
45°	9074	8779	8433	8790	9075	7021
55°	8004	7404	6845	7419	8036	7078
65°	5141	4694	4322	4699	5136	5075
75°	2476	2319	2349	2327	2424	2654
85°	970	968	1054	975	984	917
90°	541	583	595	582	548	310
95°	396	416	445	421	400	300
105°	172	174	172	175	173	187
115°	16	21	25	20	17	27
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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8199.2	8199.2	8199.2	8199.2	8199.2
2.5°	8219.7	8214.8	8220.6	8222.6	8231.4
5°	8364.8	8351.2	8370.7	8354.1	8369.7
7.5°	8662.0	8593.8	8577.3	8572.4	8580.2
10°	8636.7	8588.0	8449.6	8586.0	8616.2
12.5°	8479.8	8429.2	8299.6	8424.3	8508.1
15°	8445.7	8338.5	8373.6	8322.9	8462.3
17.5°	8450.6	8355.1	8452.5	8347.3	8476.9
20°	8596.7	8535.4	8677.6	8528.5	8613.3
22.5°	8840.3	8733.2	8908.5	8700.0	8816.9
25°	8967.0	8735.1	8885.2	8743.9	8949.5
27.5°	8933.9	8779.9	8738.0	8778.9	8938.7
30°	8959.2	8872.5	8739.0	8857.9	8949.5
32.5°	8992.3	8940.7	8789.7	8934.8	9011.8
35°	9134.6	9141.4	8971.9	9112.2	9143.4
37.5°	9331.4	9116.1	8990.4	9101.5	9300.2
40°	9285.6	8996.2	8768.2	8995.3	9283.7
42.5°	9184.3	8917.3	8592.8	8921.2	9167.7
45°	9074.2	8778.9	8433.1	8789.7	9075.2
47.5°	8962.1	8726.3	8276.2	8715.6	8962.1
50°	8844.2	8423.3	8031.6	8425.3	8839.4
52.5°	8523.7	7981.0	7449.0	7981.0	8508.1
55°	8004.3	7404.1	6844.9	7418.7	8035.5
57.5°	7371.0	6841.9	6233.9	6835.1	7378.8
60°	6647.1	6102.4	5533.4	6141.4	6684.1
62.5°	5860.8	5473.0	4934.1	5438.9	5855.9
65°	5140.7	4694.4	4322.2	4699.3	5135.8
67.5°	4363.2	4010.4	3704.5	4004.6	4433.3
70°	3673.3	3379.1	3193.0	3379.1	3649.0
72.5°	2990.3	2841.2	2747.7	2835.4	3023.4
75°	2475.8	2319.0	2349.2	2326.8	2424.2
77.5°	1977.0	1899.0	2011.1	1900.0	1964.3
80°	1567.7	1551.2	1690.5	1546.3	1587.2
82.5°	1256.9	1238.4	1369.9	1232.6	1270.6
85°	969.5	967.5	1054.3	975.3	984.1
87.5°	716.2	741.5	781.4	745.4	717.1
90°	540.8	582.7	595.3	581.7	547.6
92.5°	462.8	491.1	509.6	490.1	470.6
95°	395.6	416.1	445.3	420.9	400.5
97.5°	335.2	354.7	375.1	354.7	338.1
100°	278.7	292.3	311.8	294.3	281.6
102.5°	229.9	232.9	242.6	236.8	229.0
105°	172.5	174.4	171.5	175.4	173.4
107.5°	124.7	122.8	115.0	125.7	123.7
110°	77.9	77.9	76.0	78.9	77.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	40.9	43.8	47.7	43.8	42.9
115°	15.6	21.4	25.3	20.5	16.6
117.5°	6.8	9.7	10.7	9.7	6.8
120°	5.8	6.8	5.8	5.8	5.8
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)