

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: P295515

Luminaire Tested: **BMK-36-MCL-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: P295515
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-251-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-36-MCL-UNV-L835-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH MEDIUM CLEAR 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: 35706.0 lumens
Efficiency: N/A
Efficacy: 146.9 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.37 / 1.37
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

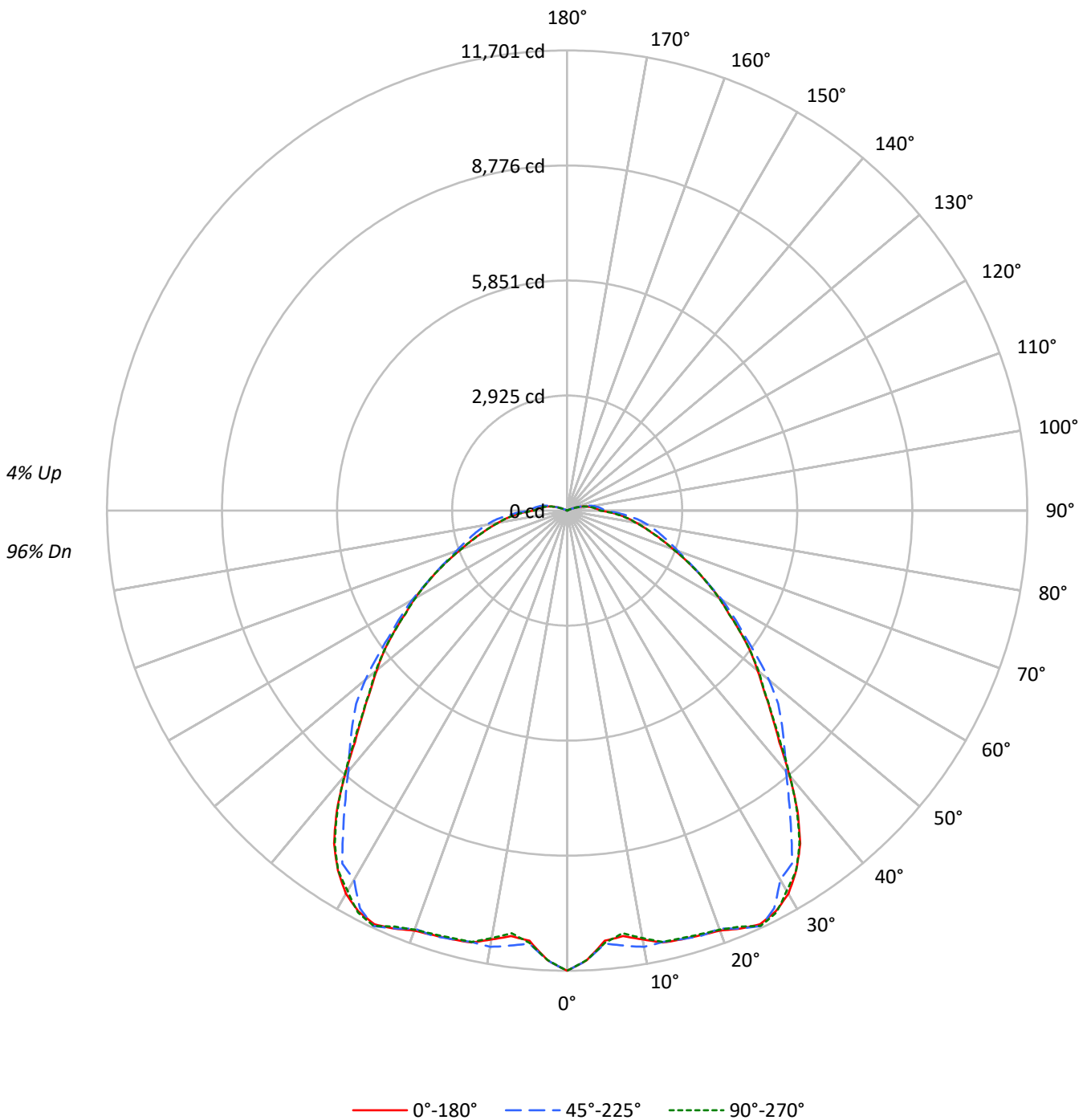
Input Watts (W): 243
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	96
1	107	102	97	93	104	99	95	91	94	91	88	90	87	84	86	83	81	79
2	97	89	82	76	94	87	80	75	82	77	72	79	74	70	75	71	68	66
3	89	78	70	63	86	76	69	62	73	66	61	69	64	59	66	62	58	55
4	81	69	61	54	79	68	60	53	65	58	52	62	56	51	59	54	50	48
5	75	62	53	46	73	61	52	46	58	51	45	56	49	44	54	48	44	41
6	69	56	47	41	67	55	46	40	53	45	40	51	44	39	49	43	38	36
7	64	51	42	36	62	50	42	36	48	41	35	46	40	35	45	39	34	32
8	60	46	38	32	58	46	37	32	44	37	31	42	36	31	41	35	31	29
9	56	43	34	29	54	42	34	29	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	90201	90201	90201
5°	84093	84630	84477
10°	84884	86356	84632
15°	87277	87244	87044
20°	89359	88931	89145
25°	93528	93920	93851
30°	93695	90236	92991
35°	89756	86198	89457
40°	80501	79165	80633
45°	71640	75239	71850
50°	66343	70358	66719
55°	61637	62953	61686
60°	57273	58152	57035
65°	52893	53040	52853
70°	48641	50732	48810
75°	46568	51851	46716
80°	47128	55353	46710
85°	50523	58345	50310



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1062.8	3.0
10°-20°	3203.9	9.0
20°-30°	5294.3	14.8
30°-40°	6301.2	17.6
40°-50°	5876.8	16.5
50°-60°	4897.2	13.7
60°-70°	3664.0	10.3
70°-80°	2544.0	7.1
80°-90°	1541.9	4.3
90°-100°	825.0	2.3
100°-110°	428.8	1.2
110°-120°	65.1	0.2
120°-130°	1.1	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°	9560.9	26.8
0°-40°	15862.1	44.4
0°-60°	26636.1	74.6
0°-90°	34386.0	96.3
90°-120°	1319.0	3.7
90°-150°	1320.1	3.7
90°-180°	1320.0	3.7
0°-180°	35706.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	11701	11701	11701	11701	11701	
5°	10980	11062	11050	11035	11030	###
15°	11285	11363	11281	11337	11255	3197
25°	11608	11602	11656	11623	11648	5311
35°	10334	10165	9925	10171	10300	6381
45°	7356	7616	7725	7629	7377	5722
55°	5368	5452	5482	5456	5372	4807
65°	3642	3684	3652	3682	3639	3610
75°	2260	2389	2516	2393	2267	2420
85°	1350	1389	1560	1389	1345	1192
90°	854	911	955	904	841	493
95°	702	748	836	743	709	550
105°	394	401	448	397	397	412
115°	37	43	56	44	39	63
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°	11700.6	11700.6	11700.6	11700.6	11700.6
2.5°	11447.1	11457.2	11445.7	11415.6	11437.1
5°	10980.3	11061.9	11050.4	11034.7	11030.4
7.5°	10912.9	11036.1	11159.3	11024.7	10838.5
10°	11071.9	11195.1	11263.8	11185.1	11039.0
12.5°	11250.9	11245.2	11238.0	11232.3	11232.3
15°	11285.3	11362.6	11281.0	11336.9	11255.2
17.5°	11316.8	11372.7	11336.9	11364.1	11292.5
20°	11365.5	11422.8	11311.1	11395.6	11338.3
22.5°	11504.4	11546.0	11500.1	11541.7	11451.4
25°	11607.5	11601.8	11656.2	11623.3	11647.6
27.5°	11488.7	11452.9	11404.2	11392.7	11523.0
30°	11250.9	11059.0	10835.6	11017.5	11166.4
32.5°	10845.6	10855.7	10642.3	10868.5	10839.9
35°	10334.4	10165.4	9924.8	10171.1	10300.0
37.5°	9618.3	9490.8	9260.2	9489.4	9589.6
40°	8800.5	8822.0	8654.5	8817.7	8814.9
42.5°	7981.3	8191.9	8174.7	8157.5	8042.9
45°	7355.5	7616.1	7725.0	7629.0	7377.0
47.5°	6791.2	7155.0	7275.3	7157.9	6807.0
50°	6318.6	6559.2	6701.0	6557.8	6354.4
52.5°	5867.5	5952.0	6069.4	5977.8	5874.7
55°	5367.7	5452.2	5482.3	5456.5	5372.0
57.5°	4870.7	5003.9	5009.6	4993.9	4867.9
60°	4482.6	4537.0	4551.4	4555.7	4464.0
62.5°	4037.2	4111.7	4060.1	4111.7	4047.2
65°	3641.9	3683.5	3652.0	3682.0	3639.1
67.5°	3235.2	3349.8	3299.7	3344.1	3245.2
70°	2865.7	3011.8	2988.9	3014.7	2875.7
72.5°	2562.1	2691.0	2744.0	2681.0	2549.2
75°	2259.9	2388.8	2516.3	2393.1	2267.1
77.5°	2020.8	2118.1	2298.6	2126.7	2017.9
80°	1780.2	1870.4	2090.9	1863.2	1764.4
82.5°	1585.4	1626.9	1848.9	1635.5	1576.8
85°	1350.5	1389.2	1559.6	1389.2	1344.8
87.5°	1109.9	1138.6	1251.7	1152.9	1094.2
90°	853.6	910.8	955.2	903.7	840.7
92.5°	780.5	822.1	899.4	814.9	774.8
95°	701.8	747.6	836.4	743.3	708.9
97.5°	643.0	665.9	753.3	664.5	638.7
100°	570.0	592.9	681.7	585.7	561.4
102.5°	485.5	498.4	580.0	502.7	486.9
105°	393.8	401.0	448.3	396.7	396.7
107.5°	293.6	289.3	305.0	285.0	292.2
110°	189.0	176.2	190.5	176.2	191.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	103.1	93.1	111.7	94.5	101.7
115°	37.2	43.0	55.9	44.4	38.7
117.5°	10.0	17.2	20.1	17.2	10.0
120°	8.6	10.0	8.6	10.0	8.6
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)