

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: P381675

Luminaire Tested: **BMK-50-NFL-UNV-L735-CD-U**

Issue Date: 2/4/2020

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: P381675
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-4)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-50-NFL-UNV-L735-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH NARROW FROSTED LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

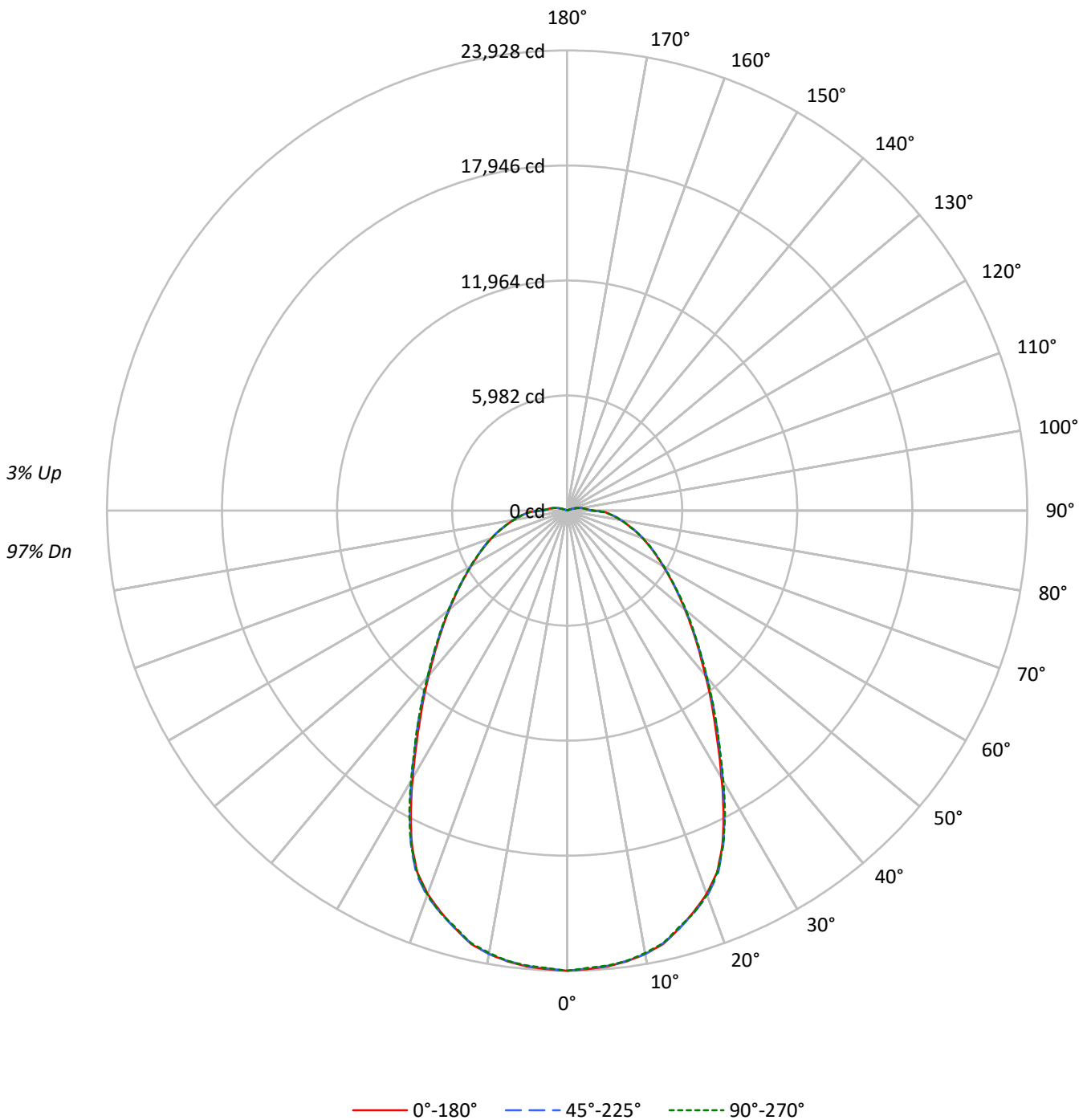
Lumens per Lamp: N/A
Luminaire Lumens: 52024.1 lumens
Efficiency: N/A
Efficacy: 156.5 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.1
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

Input Watts (W): 332.5
Input Voltage (V): NR
Input Current (A_{in}): 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	50	30	10	0	
RCR																						
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	99	99	99	97	
1	107	102	98	94	104	100	96	92	95	91	88	90	88	85	86	84	82	86	84	82	80	
2	98	90	83	77	95	88	81	76	84	78	74	80	75	72	76	73	70	76	73	70	67	
3	90	80	72	65	87	78	70	65	74	68	63	71	66	61	68	64	60	68	64	60	58	
4	83	71	63	56	80	70	62	56	67	60	55	64	58	54	62	57	52	62	57	52	50	
5	77	64	56	49	75	63	55	49	61	54	48	58	52	47	56	51	46	56	51	46	44	
6	71	59	50	44	69	57	49	43	55	48	43	53	47	42	51	46	42	51	46	42	39	
7	67	54	45	39	65	53	45	39	51	44	38	49	43	38	47	42	37	47	42	37	36	
8	62	49	41	35	61	48	41	35	47	40	35	45	39	34	44	38	34	44	38	34	32	
9	58	46	38	32	57	45	37	32	43	37	32	42	36	31	41	35	31	41	35	31	29	
10	55	42	35	30	54	42	34	30	40	34	29	39	33	29	38	33	29	38	33	29	27	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	184553	184553	184553
5°	182400	182142	181967
10°	179536	179620	179144
15°	174055	174189	173608
20°	166842	167622	167168
25°	154091	154846	154662
30°	133751	134704	135148
35°	115982	117420	117495
40°	102336	103182	103362
45°	91904	92551	92689
50°	83944	84366	84663
55°	77870	78208	78359
60°	73548	73952	74174
65°	71408	71866	71597
70°	70936	71287	70861
75°	71214	71954	71282
80°	74939	75601	74793
85°	84705	85236	84297



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2257.3	4.3
10°-20°	6329.9	12.2
20°-30°	8717.6	16.8
30°-40°	8454.0	16.3
40°-50°	7356.9	14.1
50°-60°	6120.0	11.8
60°-70°	4912.2	9.4
70°-80°	3687.4	7.1
80°-90°	2407.9	4.6
90°-100°	1087.7	2.1
100°-110°	516.2	1.0
110°-120°	82.8	0.2
120°-130°	23.0	0.0
130°-140°	25.6	0.0
140°-150°	22.2	0.0
150°-160°	12.9	0.0
160°-170°	7.8	0.0
170°-180°	2.7	0.0
0°-30°	17304.8	33.3
0°-40°	25758.8	49.5
0°-60°	39235.7	75.4
0°-90°	50243.2	96.6
90°-120°	1686.7	3.2
90°-150°	1757.5	3.4
90°-180°	1781.0	3.4
0°-180°	52024.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	23928	23928	23928	23928	23928	
5°	23805	23726	23771	23810	23748	###
15°	22495	22420	22512	22529	22437	6328
25°	19114	19113	19208	19240	19185	8690
35°	13348	13391	13513	13513	13522	8393
45°	9432	9471	9498	9512	9512	7315
55°	6778	6791	6808	6824	6821	6094
65°	4914	4929	4946	4948	4928	4886
75°	3454	3474	3490	3475	3458	3678
85°	2263	2283	2278	2248	2252	1964
90°	1382	1337	1226	1315	1345	802
95°	989	992	989	968	974	760
105°	495	492	489	482	481	523
115°	59	58	58	56	54	85
125°	25	26	25	26	27	22
135°	33	34	33	34	34	25
145°	37	36	36	36	36	22
155°	26	27	26	26	26	13
165°	28	28	27	27	27	8
175°	27	28	27	28	28	3
180°	28	28	28	28	28	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	23927.7	23927.7	23927.7	23927.7	23927.7
2.5°	23867.9	23803.6	23827.6	23868.9	23806.9
5°	23804.7	23726.3	23771.0	23810.2	23748.1
7.5°	23649.0	23568.5	23624.0	23687.1	23624.0
10°	23406.2	23333.3	23417.1	23424.8	23355.1
12.5°	23079.6	22999.1	23044.8	23073.1	23047.0
15°	22495.0	22419.9	22512.4	22528.7	22437.3
17.5°	21877.7	21851.6	21920.2	21959.3	21924.5
20°	21210.3	21228.8	21309.4	21318.1	21251.7
22.5°	20358.9	20343.7	20460.2	20446.0	20386.2
25°	19114.5	19113.4	19208.2	19239.7	19185.3
27.5°	17607.8	17571.8	17707.9	17707.9	17774.3
30°	16053.1	16031.3	16167.4	16176.1	16220.7
32.5°	14622.5	14659.5	14764.0	14786.9	14783.6
35°	13347.6	13391.2	13513.1	13513.1	13521.8
37.5°	12232.8	12266.5	12339.5	12377.6	12361.2
40°	11182.2	11226.8	11274.7	11318.3	11294.3
42.5°	10254.6	10281.8	10354.8	10384.1	10353.7
45°	9431.5	9470.7	9497.9	9512.1	9512.1
47.5°	8680.3	8686.8	8734.7	8735.8	8751.1
50°	7991.2	7973.7	8031.4	8015.1	8059.7
52.5°	7359.7	7363.0	7386.9	7396.7	7427.2
55°	6778.3	6791.4	6807.7	6824.1	6820.8
57.5°	6243.8	6264.5	6287.3	6299.3	6280.8
60°	5753.8	5792.0	5785.4	5813.7	5802.8
62.5°	5315.1	5351.0	5354.3	5368.4	5353.2
65°	4914.5	4928.6	4946.0	4948.2	4927.5
67.5°	4535.6	4548.6	4573.7	4568.2	4541.0
70°	4177.4	4182.8	4198.1	4200.3	4173.0
72.5°	3821.4	3824.6	3835.5	3833.4	3814.9
75°	3454.5	3474.1	3490.4	3475.2	3457.8
77.5°	3146.4	3148.6	3160.5	3137.7	3140.9
80°	2829.6	2842.6	2854.6	2819.8	2824.1
82.5°	2546.5	2560.7	2568.3	2525.8	2531.3
85°	2263.4	2283.0	2277.6	2248.2	2252.5
87.5°	1978.2	1956.4	1941.2	1929.2	1934.6
90°	1381.6	1336.9	1225.9	1315.2	1344.6
92.5°	1108.3	1124.6	1109.4	1092.0	1108.3
95°	988.6	991.8	988.6	967.9	974.4
97.5°	872.1	880.8	872.1	851.4	859.0
100°	749.0	751.2	745.8	732.7	738.1
102.5°	626.0	628.2	620.6	611.9	614.0
105°	495.4	492.1	488.8	482.3	481.2
107.5°	357.1	357.1	351.7	345.1	349.5
110°	234.1	230.8	218.8	221.0	223.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	124.1	125.2	127.4	120.8	116.5
115°	58.8	57.7	57.7	55.5	54.4
117.5°	26.1	26.1	24.0	25.0	26.1
120°	20.7	21.8	20.7	20.7	22.9
122.5°	22.9	24.0	22.9	24.0	25.0
125°	25.0	26.1	25.0	26.1	27.2
127.5°	27.2	28.3	27.2	28.3	28.3
130°	29.4	30.5	29.4	29.4	30.5
132.5°	30.5	31.6	31.6	31.6	31.6
135°	32.7	33.8	32.7	33.8	33.8
137.5°	34.8	34.8	34.8	34.8	34.8
140°	35.9	35.9	35.9	35.9	35.9
142.5°	37.0	37.0	37.0	37.0	35.9
145°	37.0	35.9	35.9	35.9	35.9
147.5°	34.8	34.8	34.8	34.8	33.8
150°	31.6	31.6	31.6	31.6	31.6
152.5°	28.3	29.4	28.3	28.3	28.3
155°	26.1	27.2	26.1	26.1	26.1
157.5°	27.2	27.2	26.1	26.1	27.2
160°	27.2	27.2	27.2	27.2	27.2
162.5°	28.3	28.3	27.2	27.2	27.2
165°	28.3	28.3	27.2	27.2	27.2
167.5°	28.3	28.3	27.2	27.2	27.2
170°	28.3	28.3	27.2	27.2	27.2
172.5°	28.3	28.3	28.3	28.3	28.3
175°	27.2	28.3	27.2	28.3	28.3
177.5°	27.2	27.2	27.2	28.3	29.4
180°	28.3	28.3	28.3	28.3	28.3

(END OF REPORT)