

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: P381659

Luminaire Tested: **BMK-50-NCL-UNV-L750-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: P381659
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-3)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-50-NCL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH NARROW CLEAR LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

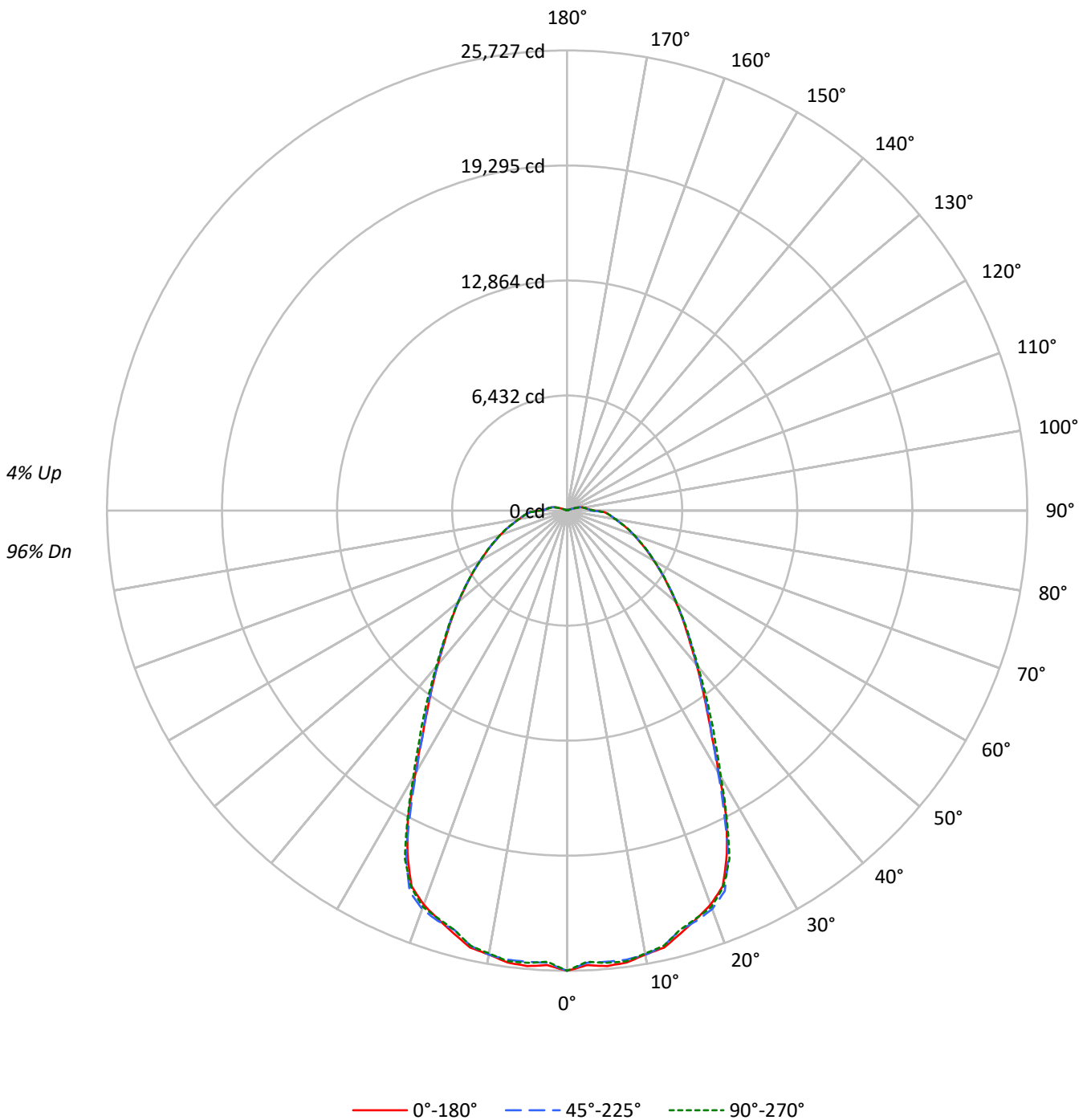
Lumens per Lamp: N/A
Luminaire Lumens: 53718.7 lumens
Efficiency: N/A
Efficacy: 161.6 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.07 / 1.07
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

Input Watts (W): 332.5
Input Voltage (V): NR
Input Current (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		103	103	103		98	98	98	96
1	107	103	98	94	104	100	96	92	95	92	89		90	88	85		86	84	82	80
2	98	90	84	78	95	88	82	77	84	79	74		80	76	72		76	73	70	68
3	91	80	73	66	88	79	71	65	75	69	64		72	67	62		69	64	61	58
4	84	72	64	57	81	71	63	57	68	61	56		65	59	54		62	57	53	51
5	77	65	57	50	75	64	56	50	61	54	49		59	53	48		57	52	47	45
6	72	59	51	45	70	58	50	45	56	49	44		54	48	43		52	47	43	40
7	67	54	46	40	65	54	46	40	52	45	40		50	44	39		48	43	38	37
8	63	50	42	37	61	49	42	36	48	41	36		46	40	36		45	39	35	33
9	59	46	39	33	58	46	38	33	44	38	33		43	37	33		42	36	32	30
10	56	43	36	31	54	43	35	31	41	35	30		40	34	30		39	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	198428	198428	198428
5°	195843	194042	194475
10°	193293	193370	192817
15°	189395	187945	187859
20°	184386	186480	185468
25°	170322	171654	173076
30°	141276	140333	143235
35°	118308	119031	121209
40°	103042	103235	104200
45°	91600	92390	92498
50°	83227	83495	83681
55°	76647	76825	76838
60°	71515	71855	71671
65°	68399	68657	68962
70°	67241	67448	67618
75°	67798	67592	68072
80°	72381	72704	72119
85°	86299	85966	86715



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2420.0	4.5
10°-20°	6895.1	12.8
20°-30°	9589.0	17.9
30°-40°	8644.3	16.1
40°-50°	7326.4	13.6
50°-60°	5996.2	11.2
60°-70°	4713.4	8.8
70°-80°	3505.6	6.5
80°-90°	2441.4	4.5
90°-100°	1263.6	2.4
100°-110°	707.0	1.3
110°-120°	103.5	0.2
120°-130°	28.0	0.1
130°-140°	31.1	0.1
140°-150°	26.8	0.0
150°-160°	15.3	0.0
160°-170°	9.1	0.0
170°-180°	3.1	0.0
0°-30°	18904.1	35.2
0°-40°	27548.4	51.3
0°-60°	40870.9	76.1
0°-90°	51531.4	95.9
90°-120°	2074.1	3.9
90°-150°	2159.9	4.0
90°-180°	2187.0	4.1
0°-180°	53718.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	25727	25727	25727	25727	25727	
5°	25559	25334	25324	25455	25380	###
15°	24478	24338	24290	24464	24279	6902
25°	21128	21188	21293	21491	21470	9548
35°	13615	13598	13698	13740	13949	8596
45°	9400	9418	9481	9424	9492	7295
55°	6672	6640	6687	6687	6688	5992
65°	4707	4704	4725	4777	4746	4685
75°	3289	3300	3279	3301	3302	3501
85°	2306	2312	2297	2289	2317	1969
90°	1510	1436	1314	1418	1477	872
95°	1128	1138	1166	1111	1106	895
105°	712	705	699	682	691	711
115°	69	68	68	64	67	105
125°	31	32	31	31	32	27
135°	40	41	40	40	41	31
145°	44	43	44	43	43	27
155°	31	32	31	31	31	15
165°	33	32	32	32	32	9
175°	32	32	32	32	33	3
180°	32	32	32	32	32	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	25726.6	25726.6	25726.6	25726.6	25726.6
2.5°	25437.1	25312.9	25304.0	25340.6	25244.1
5°	25559.1	25333.9	25324.0	25454.8	25380.5
7.5°	25481.5	25294.0	25325.1	25477.0	25407.1
10°	25199.7	25123.2	25209.7	25338.4	25137.6
12.5°	25025.6	24919.1	24919.1	24938.0	24928.0
15°	24477.6	24337.9	24290.2	24464.3	24279.1
17.5°	23959.7	23837.6	24046.2	23994.0	23916.4
20°	23440.6	23510.4	23706.8	23600.3	23578.1
22.5°	22732.9	22758.4	23023.5	23027.9	22793.9
25°	21127.9	21187.8	21293.2	21490.6	21469.5
27.5°	19237.8	19006.0	18996.0	19435.3	19297.7
30°	16956.2	16893.0	16843.1	17172.5	17191.4
32.5°	15086.1	15152.7	15082.8	15262.5	15430.0
35°	13615.3	13597.6	13698.5	13739.6	13949.2
37.5°	12364.2	12348.6	12388.6	12513.9	12571.6
40°	11259.4	11259.4	11280.5	11405.8	11385.9
42.5°	10231.2	10328.8	10323.2	10358.7	10361.0
45°	9400.4	9418.1	9481.4	9423.7	9492.5
47.5°	8636.2	8606.2	8687.2	8620.6	8681.6
50°	7923.0	7870.8	7948.5	7876.4	7966.2
52.5°	7256.3	7199.8	7301.8	7228.6	7294.0
55°	6671.8	6639.6	6687.3	6687.3	6688.4
57.5°	6118.3	6111.6	6112.8	6157.1	6149.4
60°	5594.8	5621.4	5621.4	5652.4	5607.0
62.5°	5133.3	5143.3	5177.7	5195.5	5156.6
65°	4707.4	4704.1	4725.2	4777.3	4746.2
67.5°	4302.6	4315.9	4331.4	4385.7	4327.0
70°	3959.8	3956.5	3972.0	4007.5	3982.0
72.5°	3627.1	3620.4	3632.6	3650.4	3649.2
75°	3288.8	3299.8	3278.8	3301.0	3302.1
77.5°	2994.8	2992.6	2991.5	2980.4	3002.6
80°	2733.0	2730.8	2745.2	2716.4	2723.1
82.5°	2514.5	2511.2	2527.8	2489.0	2495.7
85°	2306.0	2311.6	2297.1	2289.4	2317.1
87.5°	2091.9	2077.5	2062.0	2067.5	2072.0
90°	1509.6	1436.4	1314.4	1417.5	1477.4
92.5°	1249.0	1284.4	1236.7	1227.9	1273.4
95°	1128.0	1138.0	1165.8	1111.4	1105.9
97.5°	1059.3	1083.7	1075.9	1040.4	1039.3
100°	947.2	960.6	953.9	940.6	941.7
102.5°	847.4	876.3	845.2	838.5	848.5
105°	712.1	705.4	698.8	682.2	691.0
107.5°	494.7	501.4	486.9	483.6	498.0
110°	305.0	300.6	286.2	289.5	298.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	152.0	155.3	155.3	149.7	147.5
115°	68.8	67.7	67.7	64.3	66.6
117.5°	32.2	31.1	28.8	31.1	33.3
120°	25.5	26.6	24.4	25.5	27.7
122.5°	27.7	29.9	27.7	28.8	29.9
125°	31.1	32.2	31.1	31.1	32.2
127.5°	33.3	34.4	33.3	33.3	34.4
130°	35.5	36.6	35.5	36.6	36.6
132.5°	37.7	38.8	37.7	37.7	38.8
135°	39.9	41.0	39.9	39.9	41.0
137.5°	42.1	43.3	42.1	42.1	42.1
140°	44.4	44.4	43.3	44.4	43.3
142.5°	45.5	44.4	44.4	44.4	43.3
145°	44.4	43.3	44.4	43.3	43.3
147.5°	42.1	41.0	41.0	41.0	41.0
150°	37.7	37.7	36.6	37.7	37.7
152.5°	34.4	34.4	33.3	33.3	34.4
155°	31.1	32.2	31.1	31.1	31.1
157.5°	32.2	32.2	31.1	31.1	32.2
160°	32.2	32.2	31.1	31.1	32.2
162.5°	32.2	32.2	31.1	31.1	32.2
165°	33.3	32.2	32.2	32.2	32.2
167.5°	33.3	32.2	32.2	31.1	32.2
170°	33.3	33.3	32.2	31.1	32.2
172.5°	33.3	33.3	32.2	32.2	32.2
175°	32.2	32.2	32.2	32.2	33.3
177.5°	31.1	31.1	31.1	32.2	33.3
180°	32.2	32.2	32.2	32.2	32.2

(END OF REPORT)