

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: P294556

Luminaire Tested: **BMK-12-NCL-UNV-L750-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: P294556
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1903-198-7)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-12-NCL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH NARROW CLEAR LENS
Light Source: (528) 70 CRI 5000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

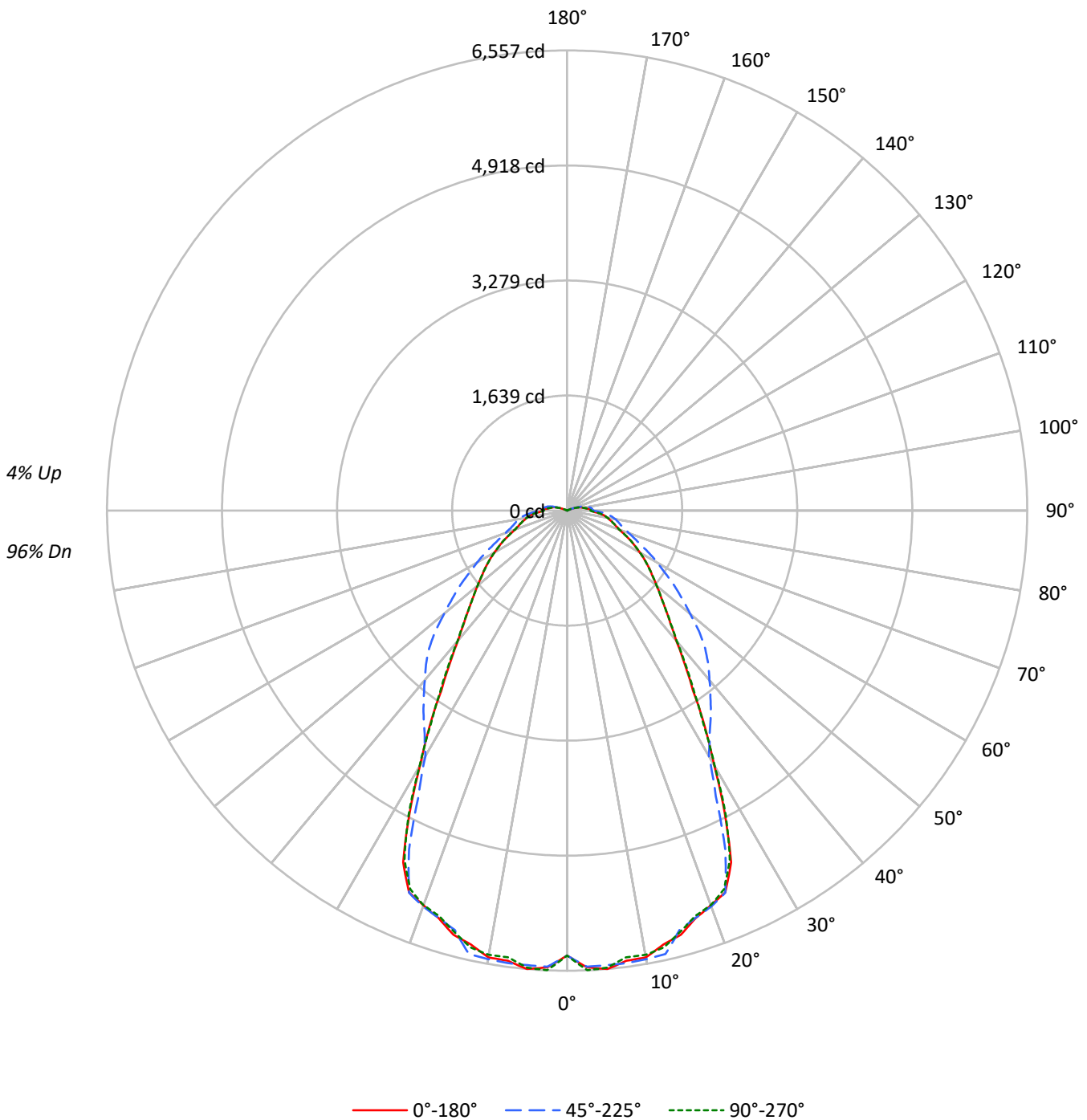
Lumens per Lamp: N/A
Luminaire Lumens: 13171.0 lumens
Efficiency: N/A
Efficacy: 177.3 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

Input Watts (W): 74.3
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	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	108	103	99	95	105	100	96	93	95	92	89	91	88	86	86	84	82	80				
2	99	91	84	79	96	89	83	78	84	79	75	81	76	73	77	74	71	68				
3	91	81	73	67	88	79	72	66	76	70	65	72	67	63	69	65	61	59				
4	84	73	65	58	82	71	64	58	68	62	56	65	60	55	63	58	54	52				
5	78	66	58	51	76	65	57	51	62	55	50	60	54	49	58	52	48	46				
6	73	60	52	46	71	59	51	45	57	50	45	55	49	44	53	48	43	41				
7	68	55	47	41	66	54	46	41	52	45	40	51	44	40	49	43	39	37				
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	45	40	36	34				
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	42	37	33	31				
10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	34	30	29				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	48883	48883	48883
5°	50217	49795	50076
10°	49550	49757	49285
15°	48388	47845	48079
20°	47061	47196	47044
25°	44549	42948	44183
30°	34889	33639	35042
35°	27157	30974	27391
40°	22140	28858	22219
45°	19272	27087	19282
50°	17498	24007	17509
55°	16384	21357	16296
60°	15304	18920	15304
65°	14322	16910	14322
70°	13419	15913	13400
75°	13977	16246	13932
80°	15355	18415	15325
85°	17373	21010	17332



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	617.2	4.7
10°-20°	1754.3	13.3
20°-30°	2407.9	18.3
30°-40°	2111.2	16.0
40°-50°	1806.9	13.7
50°-60°	1463.3	11.1
60°-70°	1097.5	8.3
70°-80°	799.4	6.1
80°-90°	547.2	4.2
90°-100°	338.3	2.6
100°-110°	196.4	1.5
110°-120°	31.0	0.2
120°-130°	0.4	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°	4779.3	36.3
0°-40°	6890.5	52.3
0°-60°	10160.7	77.1
0°-90°	12604.8	95.7
90°-120°	565.7	4.3
90°-150°	566.1	4.3
90°-180°	566.0	4.3
0°-180°	13171.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6341	6341	6341	6341	6341	
5°	6557	6496	6502	6515	6539	620
15°	6257	6194	6187	6187	6217	1758
25°	5529	5321	5330	5330	5483	2447
35°	3127	3308	3566	3336	3154	1992
45°	1979	2304	2781	2284	1980	1542
55°	1427	1623	1860	1624	1419	1275
65°	986	1130	1164	1124	986	978
75°	678	770	788	766	676	718
85°	464	504	562	504	463	402
90°	341	354	372	348	332	193
95°	290	295	350	300	293	230
105°	180	185	231	181	178	182
115°	19	20	27	20	19	30
125°	0	0	0	0	0	0
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°	6341.0	6341.0	6341.0	6341.0	6341.0
2.5°	6513.8	6467.4	6506.2	6532.2	6555.9
5°	6557.0	6496.5	6501.9	6514.9	6538.6
7.5°	6470.6	6405.8	6501.9	6454.4	6420.9
10°	6463.0	6358.3	6490.0	6402.6	6428.5
12.5°	6332.4	6321.6	6470.6	6363.7	6373.4
15°	6256.8	6194.1	6186.6	6186.6	6216.8
17.5°	6089.3	6051.5	6086.1	6067.7	6058.0
20°	5985.7	5968.4	6002.9	6020.2	5983.5
22.5°	5887.4	5803.1	5891.7	5818.3	5839.9
25°	5528.8	5321.4	5330.1	5330.1	5483.4
27.5°	4861.3	4740.4	4588.1	4757.6	4898.0
30°	4189.5	4225.2	4039.4	4217.6	4207.9
32.5°	3647.3	3747.8	3778.0	3752.1	3620.3
35°	3126.8	3308.2	3566.3	3336.3	3153.8
37.5°	2743.3	2992.8	3355.7	2987.4	2774.7
40°	2420.4	2717.4	3154.8	2730.4	2429.0
42.5°	2177.4	2503.6	2976.6	2490.6	2183.9
45°	1978.7	2303.8	2781.1	2284.3	1979.7
47.5°	1808.0	2119.1	2547.8	2120.1	1808.0
50°	1666.5	1919.3	2286.5	1918.2	1667.6
52.5°	1533.7	1769.1	2064.0	1756.2	1538.0
55°	1426.8	1623.3	1859.9	1624.4	1419.2
57.5°	1309.0	1490.5	1652.5	1488.3	1314.4
60°	1197.8	1359.8	1480.8	1347.9	1197.8
62.5°	1088.7	1241.0	1318.7	1242.1	1090.9
65°	986.1	1129.7	1164.3	1124.3	986.1
67.5°	881.3	1021.7	1037.9	1015.3	886.7
70°	790.6	931.0	937.5	921.3	789.5
72.5°	729.0	842.4	850.0	844.6	729.0
75°	678.3	770.1	788.4	765.8	676.1
77.5°	625.4	701.0	743.1	702.0	629.7
80°	580.0	636.2	695.6	637.2	578.9
82.5°	532.5	574.6	640.5	576.7	536.8
85°	464.4	504.4	561.6	504.4	463.3
87.5°	378.0	427.7	463.3	424.5	371.5
90°	341.3	354.3	371.5	347.8	331.6
92.5°	351.0	331.6	360.7	329.4	337.0
95°	290.5	294.9	349.9	300.3	292.7
97.5°	262.5	274.3	332.7	268.9	261.4
100°	231.1	250.6	299.2	246.3	232.2
102.5°	210.6	223.6	274.3	226.8	213.9
105°	180.4	184.7	231.1	181.4	178.2
107.5°	135.0	135.0	152.3	136.1	132.8
110°	89.6	85.3	91.8	83.2	89.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	47.5	45.4	52.9	44.3	46.4
115°	19.4	20.5	27.0	20.5	19.4
117.5°	5.4	8.6	9.7	8.6	5.4
120°	3.2	4.3	3.2	4.3	3.2
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)