

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: P294574

Luminaire Tested: **BMK-24-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: P294574
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-24-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

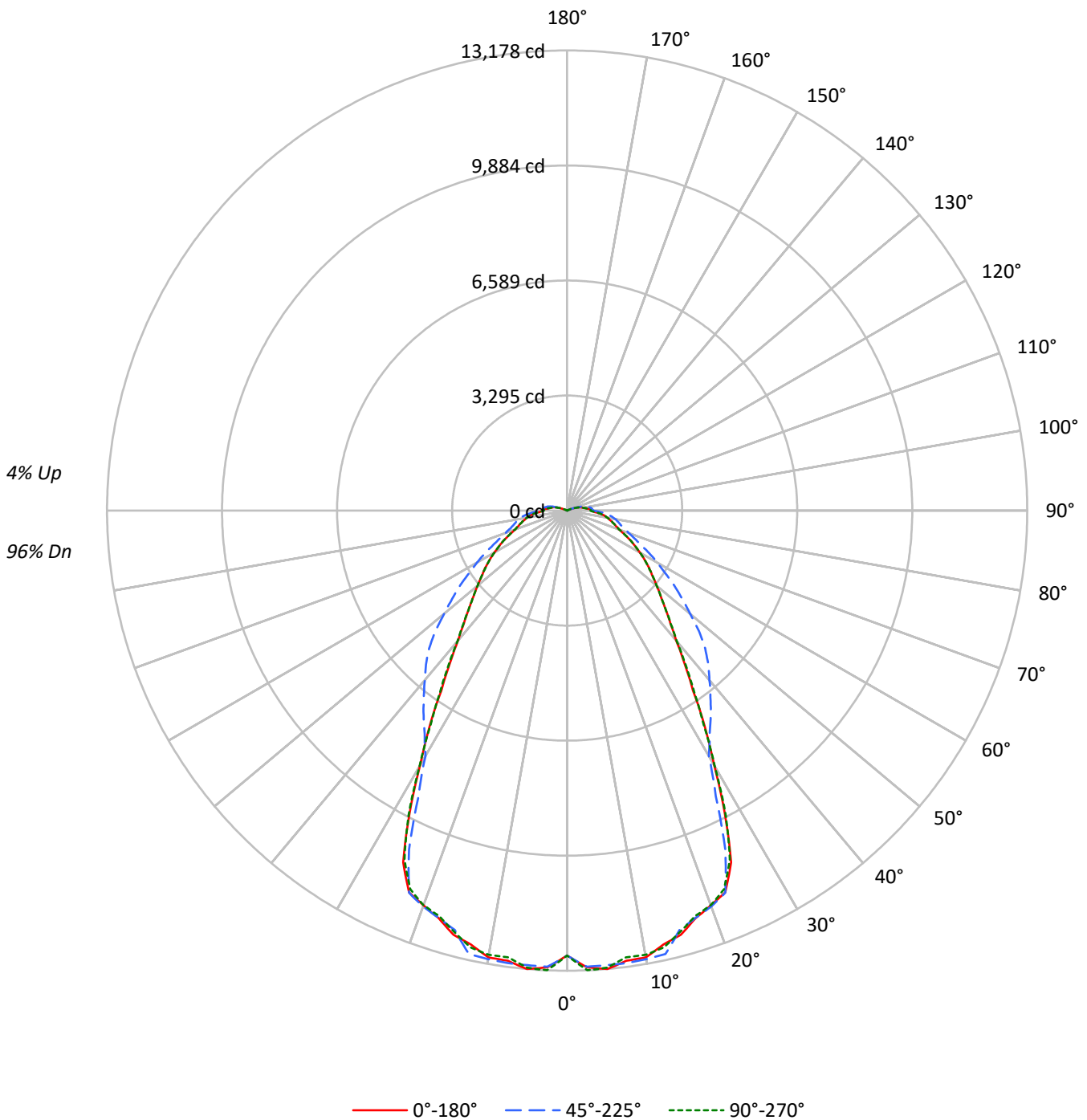
Lumens per Lamp: N/A
Luminaire Lumens: 26471.0 lumens
Efficiency: N/A
Efficacy: 170.2 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

Input Watts (W): 155.5
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°	98245	98245	98245
5°	100926	100078	100643
10°	99585	100002	99052
15°	97250	96158	96628
20°	94582	94856	94548
25°	89533	86315	88799
30°	70121	67608	70428
35°	54578	62252	55050
40°	44497	57999	44656
45°	38732	54440	38753
50°	35167	48249	35189
55°	32927	42922	32753
60°	30757	38023	30757
65°	28783	33985	28783
70°	26969	31981	26933
75°	28090	32652	27999
80°	30860	37007	30802
85°	34919	42229	34837



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1240.4	4.7
10°-20°	3525.7	13.3
20°-30°	4839.4	18.3
30°-40°	4243.1	16.0
40°-50°	3631.5	13.7
50°-60°	2940.9	11.1
60°-70°	2205.8	8.3
70°-80°	1606.6	6.1
80°-90°	1099.8	4.2
90°-100°	679.9	2.6
100°-110°	394.7	1.5
110°-120°	62.4	0.2
120°-130°	0.9	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°	9605.5	36.3
0°-40°	13848.5	52.3
0°-60°	20420.9	77.1
0°-90°	25333.1	95.7
90°-120°	1137.0	4.3
90°-150°	1137.9	4.3
90°-180°	1138.0	4.3
0°-180°	26471.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	12744	12744	12744	12744	12744	
5°	13178	13057	13068	13094	13141	###
15°	12575	12449	12434	12434	12494	3533
25°	11112	10695	10712	10712	11021	4917
35°	6284	6649	7168	6705	6338	4003
45°	3977	4630	5590	4591	3979	3100
55°	2868	3262	3738	3265	2852	2562
65°	1982	2270	2340	2260	1982	1965
75°	1363	1548	1585	1539	1359	1443
85°	933	1014	1129	1014	931	807
90°	686	712	747	699	666	389
95°	584	593	703	604	588	462
105°	362	371	464	365	358	366
115°	39	41	54	41	39	60
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°	12744.1	12744.1	12744.1	12744.1	12744.1
2.5°	13091.4	12998.1	13076.2	13128.3	13176.1
5°	13178.2	13056.7	13067.5	13093.6	13141.3
7.5°	13004.6	12874.3	13067.5	12972.0	12904.7
10°	12989.4	12778.8	13043.7	12867.8	12919.9
12.5°	12726.7	12705.0	13004.6	12789.7	12809.2
15°	12574.8	12448.9	12433.7	12433.7	12494.5
17.5°	12238.3	12162.4	12231.8	12194.9	12175.4
20°	12029.9	11995.2	12064.7	12099.4	12025.6
22.5°	11832.4	11663.1	11841.1	11693.5	11736.9
25°	11111.7	10695.0	10712.3	10712.3	11020.6
27.5°	9770.3	9527.1	9221.1	9561.9	9844.1
30°	8420.1	8491.7	8118.4	8476.5	8457.0
32.5°	7330.4	7532.3	7593.1	7541.0	7276.1
35°	6284.1	6648.8	7167.6	6705.3	6338.4
37.5°	5513.5	6015.0	6744.3	6004.1	5576.5
40°	4864.5	5461.4	6340.6	5487.5	4881.9
42.5°	4376.1	5031.7	5982.4	5005.6	4389.1
45°	3976.7	4630.1	5589.5	4591.0	3978.9
47.5°	3633.7	4258.9	5120.7	4261.1	3633.7
50°	3349.4	3857.3	4595.3	3855.1	3351.5
52.5°	3082.4	3555.6	4148.2	3529.5	3091.1
55°	2867.5	3262.5	3737.9	3264.7	2852.3
57.5°	2630.9	2995.5	3321.2	2991.2	2641.7
60°	2407.3	2732.9	2976.0	2709.0	2407.3
62.5°	2188.1	2494.1	2650.4	2496.3	2192.4
65°	1981.8	2270.5	2340.0	2259.7	1981.8
67.5°	1771.3	2053.5	2086.0	2040.4	1782.1
70°	1588.9	1871.1	1884.2	1851.6	1586.8
72.5°	1465.2	1693.1	1708.3	1697.5	1465.2
75°	1363.2	1547.7	1584.6	1539.0	1358.8
77.5°	1256.8	1408.8	1493.4	1410.9	1265.5
80°	1165.7	1278.5	1397.9	1280.7	1163.5
82.5°	1070.1	1154.8	1287.2	1159.1	1078.8
85°	933.4	1013.7	1128.8	1013.7	931.2
87.5°	759.7	859.6	931.2	853.1	746.7
90°	685.9	712.0	746.7	699.0	666.4
92.5°	705.5	666.4	725.0	662.1	677.3
95°	583.9	592.6	703.3	603.5	588.3
97.5°	527.5	551.4	668.6	540.5	525.3
100°	464.5	503.6	601.3	494.9	466.7
102.5°	423.3	449.3	551.4	455.8	429.8
105°	362.5	371.2	464.5	364.7	358.2
107.5°	271.3	271.3	306.1	273.5	267.0
110°	180.2	171.5	184.5	167.1	180.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	95.5	91.2	106.4	89.0	93.3
115°	39.1	41.2	54.3	41.2	39.1
117.5°	10.9	17.4	19.5	17.4	10.9
120°	6.5	8.7	6.5	8.7	6.5
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)