

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: P381671

Luminaire Tested: **BMK-70-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: P381671
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-70-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

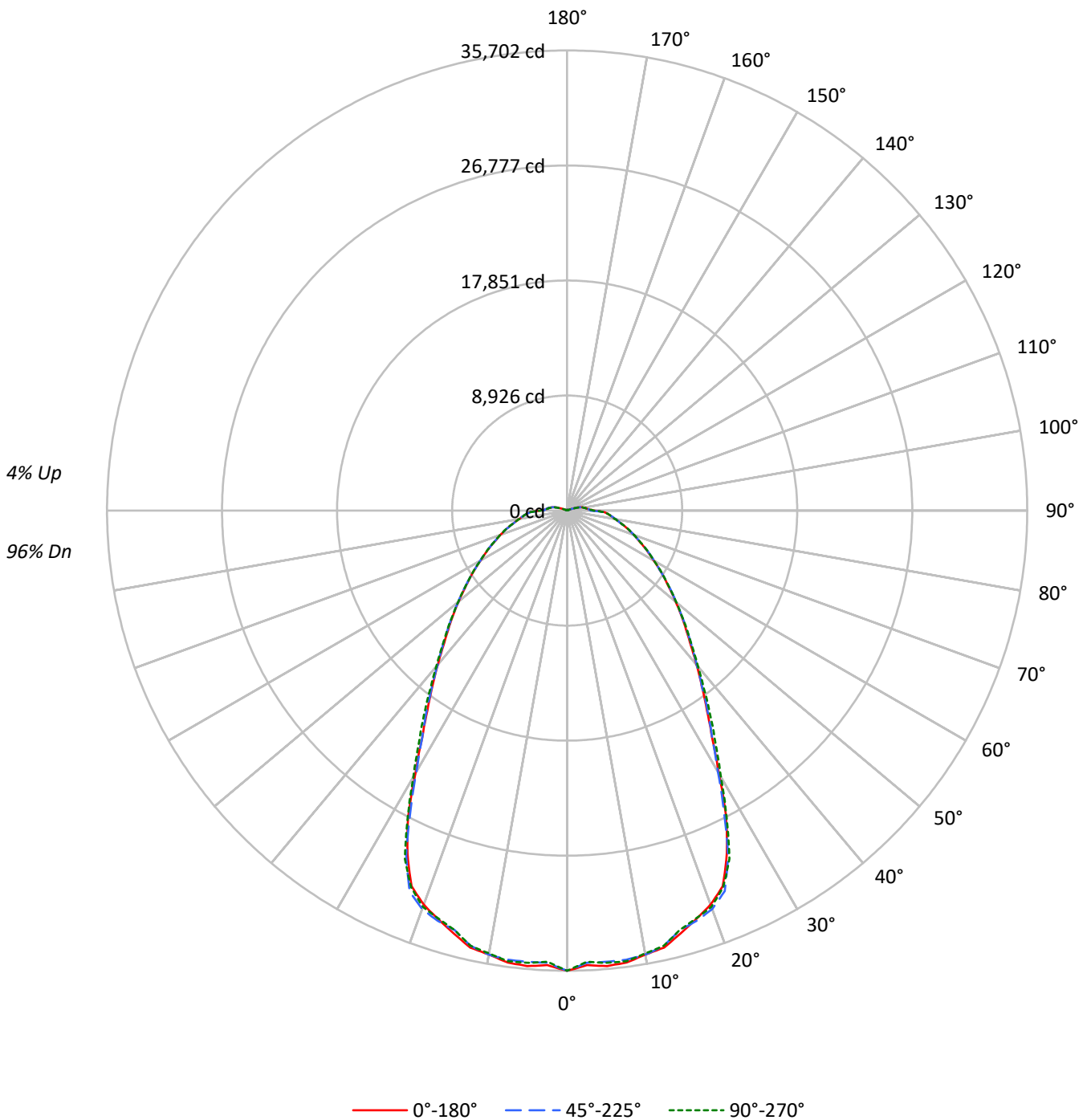
Lumens per Lamp: N/A
Luminaire Lumens: 74547.4 lumens
Efficiency: N/A
Efficacy: 148.9 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.07 / 1.07
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

Input Watts (W): 500.7
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°	275366	275366	275366
5°	271779	269278	269880
10°	268240	268347	267579
15°	262832	260818	260699
20°	255879	258785	257381
25°	236362	238211	240184
30°	196054	194746	198773
35°	164180	165184	168206
40°	142996	143264	144602
45°	127118	128213	128363
50°	115497	115869	116127
55°	106366	106613	106631
60°	99244	99716	99460
65°	94920	95278	95702
70°	93313	93600	93836
75°	94084	93799	94465
80°	100448	100896	100080
85°	119760	119299	120336



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3358.4	4.5
10°-20°	9568.6	12.8
20°-30°	13307.0	17.9
30°-40°	11996.0	16.1
40°-50°	10167.1	13.6
50°-60°	8321.1	11.2
60°-70°	6541.0	8.8
70°-80°	4864.9	6.5
80°-90°	3388.0	4.5
90°-100°	1753.6	2.4
100°-110°	981.1	1.3
110°-120°	143.6	0.2
120°-130°	38.8	0.1
130°-140°	43.1	0.1
140°-150°	37.1	0.0
150°-160°	21.2	0.0
160°-170°	12.6	0.0
170°-180°	4.3	0.0
0°-30°	26233.9	35.2
0°-40°	38229.9	51.3
0°-60°	56718.1	76.1
0°-90°	71512.0	95.9
90°-120°	2878.3	3.9
90°-150°	2997.3	4.0
90°-180°	3035.0	4.1
0°-180°	74547.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	35702	35702	35702	35702	35702	
5°	35469	35157	35143	35325	35222	###
15°	33969	33775	33708	33950	33693	9578
25°	29320	29403	29549	29823	29794	13251
35°	18894	18870	19010	19067	19358	11930
45°	13045	13070	13158	13078	13173	10124
55°	9259	9214	9280	9280	9282	8316
65°	6533	6528	6557	6630	6586	6501
75°	4564	4579	4550	4581	4582	4859
85°	3200	3208	3188	3177	3216	2733
90°	2095	1993	1824	1967	2050	1209
95°	1565	1579	1618	1542	1535	1242
105°	988	979	970	947	959	987
115°	95	94	94	89	92	146
125°	43	45	43	43	45	38
135°	55	57	55	55	57	43
145°	62	60	62	60	60	38
155°	43	45	43	43	43	21
165°	46	45	45	45	45	13
175°	45	45	45	45	46	4
180°	45	45	45	45	45	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	35701.8	35701.8	35701.8	35701.8	35701.8
2.5°	35300.0	35127.6	35115.3	35166.1	35032.2
5°	35469.3	35156.9	35143.0	35324.7	35221.5
7.5°	35361.6	35101.5	35144.6	35355.4	35258.5
10°	34970.6	34864.4	34984.5	35163.0	34884.4
12.5°	34729.0	34581.2	34581.2	34607.4	34593.5
15°	33968.6	33774.6	33708.4	33950.1	33693.0
17.5°	33249.7	33080.4	33369.8	33297.4	33189.7
20°	32529.3	32626.3	32898.8	32751.0	32720.2
22.5°	31547.3	31582.7	31950.6	31956.7	31631.9
25°	29320.0	29403.1	29549.3	29823.3	29794.1
27.5°	26697.1	26375.4	26361.5	26971.0	26780.2
30°	23530.8	23443.0	23373.8	23830.9	23857.1
32.5°	20935.6	21027.9	20931.0	21180.3	21412.8
35°	18894.5	18869.9	19010.0	19066.9	19357.8
37.5°	17158.2	17136.7	17192.1	17366.0	17446.1
40°	15625.1	15625.1	15654.4	15828.3	15800.6
42.5°	14198.2	14333.7	14326.0	14375.2	14378.3
45°	13045.3	13069.9	13157.7	13077.6	13173.1
47.5°	11984.7	11943.2	12055.5	11963.2	12047.8
50°	10995.0	10922.6	11030.4	10930.3	11055.0
52.5°	10069.9	9991.4	10133.0	10031.4	10122.2
55°	9258.7	9214.1	9280.2	9280.2	9281.8
57.5°	8490.6	8481.4	8482.9	8544.5	8533.7
60°	7764.1	7801.0	7801.0	7844.1	7781.0
62.5°	7123.7	7137.6	7185.3	7209.9	7156.1
65°	6532.7	6528.0	6557.3	6629.6	6586.5
67.5°	5970.8	5989.3	6010.8	6086.3	6004.7
70°	5495.2	5490.6	5512.1	5561.4	5526.0
72.5°	5033.4	5024.2	5041.1	5065.7	5064.2
75°	4563.9	4579.3	4550.1	4580.9	4582.4
77.5°	4156.0	4152.9	4151.4	4136.0	4166.8
80°	3792.8	3789.7	3809.7	3769.7	3778.9
82.5°	3489.5	3484.9	3508.0	3454.1	3463.4
85°	3200.1	3207.8	3187.8	3177.0	3215.5
87.5°	2903.1	2883.0	2861.5	2869.2	2875.4
90°	2094.9	1993.4	1824.0	1967.2	2050.3
92.5°	1733.2	1782.5	1716.3	1704.0	1767.1
95°	1565.4	1579.3	1617.8	1542.3	1534.6
97.5°	1470.0	1503.9	1493.1	1443.8	1442.3
100°	1314.5	1333.0	1323.8	1305.3	1306.8
102.5°	1176.0	1216.0	1172.9	1163.7	1177.5
105°	988.2	979.0	969.7	946.6	959.0
107.5°	686.5	695.7	675.7	671.1	691.1
110°	423.3	417.1	397.1	401.7	414.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	210.9	215.5	215.5	207.8	204.7
115°	95.4	93.9	93.9	89.3	92.4
117.5°	44.6	43.1	40.0	43.1	46.2
120°	35.4	36.9	33.9	35.4	38.5
122.5°	38.5	41.6	38.5	40.0	41.6
125°	43.1	44.6	43.1	43.1	44.6
127.5°	46.2	47.7	46.2	46.2	47.7
130°	49.3	50.8	49.3	50.8	50.8
132.5°	52.3	53.9	52.3	52.3	53.9
135°	55.4	57.0	55.4	55.4	57.0
137.5°	58.5	60.0	58.5	58.5	58.5
140°	61.6	61.6	60.0	61.6	60.0
142.5°	63.1	61.6	61.6	61.6	60.0
145°	61.6	60.0	61.6	60.0	60.0
147.5°	58.5	57.0	57.0	57.0	57.0
150°	52.3	52.3	50.8	52.3	52.3
152.5°	47.7	47.7	46.2	46.2	47.7
155°	43.1	44.6	43.1	43.1	43.1
157.5°	44.6	44.6	43.1	43.1	44.6
160°	44.6	44.6	43.1	43.1	44.6
162.5°	44.6	44.6	43.1	43.1	44.6
165°	46.2	44.6	44.6	44.6	44.6
167.5°	46.2	44.6	44.6	43.1	44.6
170°	46.2	46.2	44.6	43.1	44.6
172.5°	46.2	46.2	44.6	44.6	44.6
175°	44.6	44.6	44.6	44.6	46.2
177.5°	43.1	43.1	43.1	44.6	46.2
180°	44.6	44.6	44.6	44.6	44.6

(END OF REPORT)