

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: P381653

Luminaire Tested: **BMK-70-WCL-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: P381653
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-2)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-70-WCL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH WIDE CLEAR LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 76933.3 lumens
Efficiency: N/A
Efficacy: 153.7 lumens/watt
Spacing Criteria (0/90/45): 1.76 / 1.77 / 1.85
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

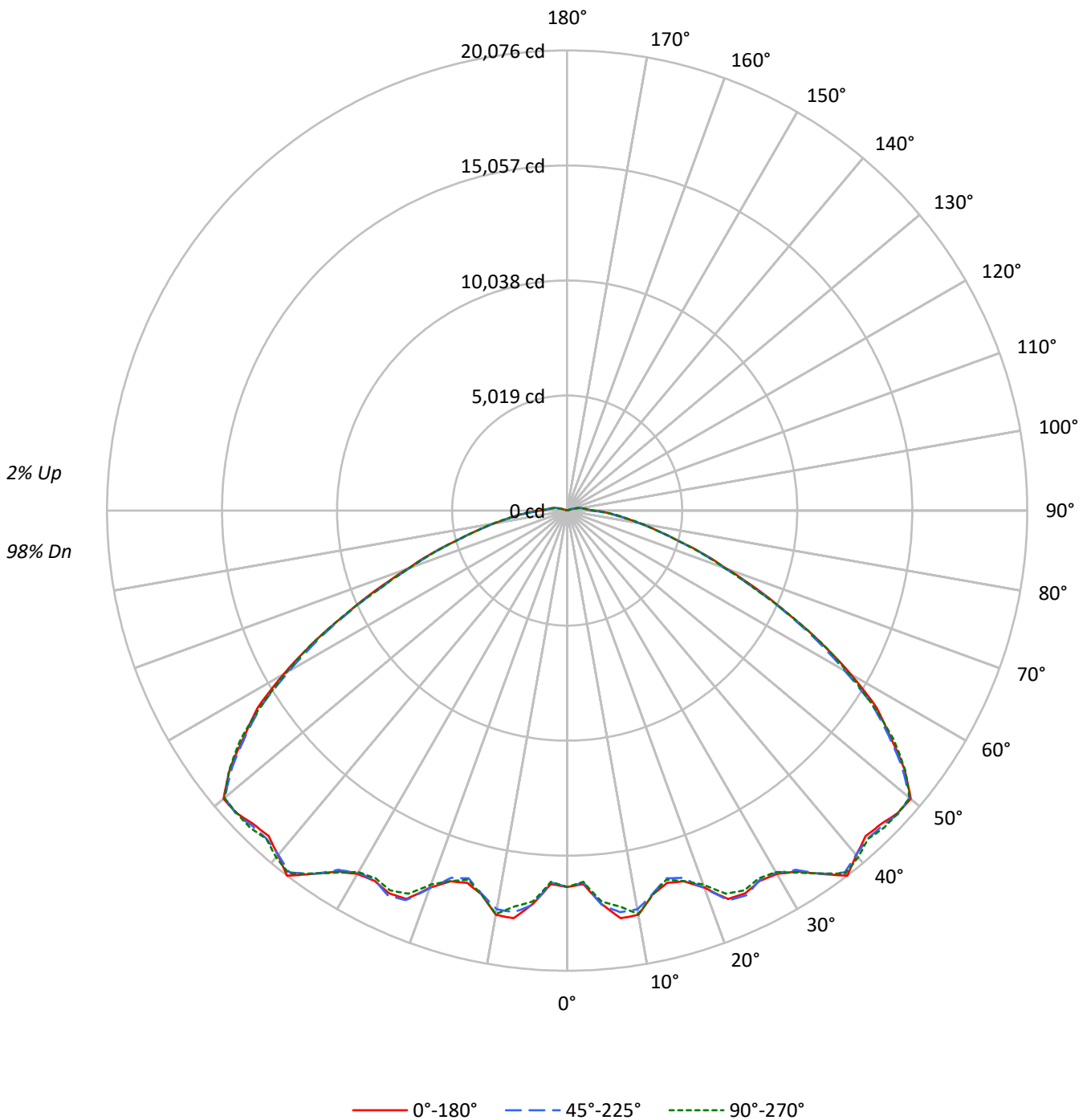
Input Watts (W): 500.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	107	102	98	93	104	100	95	92	95	92	88	91	88	85	87	85	82	80
2	97	88	81	74	94	86	79	73	82	76	71	78	74	69	75	71	68	65
3	88	76	68	61	85	74	66	60	71	64	59	68	62	57	65	60	56	54
4	80	67	57	50	77	65	56	50	62	55	49	60	53	48	57	52	47	45
5	73	59	49	42	70	58	49	42	55	47	41	53	46	41	51	45	40	38
6	67	52	43	36	64	51	42	36	49	41	35	47	40	35	46	39	34	32
7	61	47	38	31	59	46	37	31	44	36	31	43	36	30	41	35	30	28
8	57	43	34	27	55	42	33	27	40	32	27	39	32	27	37	31	26	24
9	53	39	30	24	51	38	30	24	37	29	24	35	29	24	34	28	23	21
10	49	35	27	22	48	35	27	22	34	26	21	33	26	21	32	25	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	126620	126620	126620
5°	131994	132219	131180
10°	137364	135498	137057
15°	130120	128536	129037
20°	137695	137913	136557
25°	148462	149281	147369
30°	152504	152004	151683
35°	168130	168157	167916
40°	179597	179400	180724
45°	188543	189443	190612
50°	205548	204804	204934
55°	197775	196767	199721
60°	182810	179012	181098
65°	154058	153253	154303
70°	125308	123399	124106
75°	101765	101639	101163
80°	85896	85652	87241
85°	77078	74368	78979



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1656.1	2.2
10°-20°	4841.3	6.3
20°-30°	8435.7	11.0
30°-40°	12107.2	15.7
40°-50°	15095.8	19.6
50°-60°	15261.7	19.8
60°-70°	10497.0	13.6
70°-80°	5339.6	6.9
80°-90°	2275.0	3.0
90°-100°	909.5	1.2
100°-110°	390.0	0.5
110°-120°	43.9	0.1
120°-130°	20.4	0.0
130°-140°	22.5	0.0
140°-150°	18.9	0.0
150°-160°	10.5	0.0
160°-170°	6.2	0.0
170°-180°	2.1	0.0
0°-30°	14933.1	19.4
0°-40°	27040.4	35.1
0°-60°	57397.8	74.6
0°-90°	75509.4	98.1
90°-120°	1343.4	1.7
90°-150°	1405.2	1.8
90°-180°	1424.0	1.9
0°-180°	76933.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	16417	16417	16417	16417	16417	
5°	17226	17160	17256	17212	17120	###
15°	16817	16772	16612	16728	16677	4859
25°	18416	18444	18518	18552	18281	8437
35°	19349	19384	19352	19369	19324	12124
45°	19349	19409	19441	19432	19561	15057
55°	17216	17123	17128	17089	17385	15367
65°	10603	10581	10547	10563	10620	10605
75°	4936	4887	4930	4886	4907	5387
85°	2060	2027	1987	2036	2110	1927
90°	1159	1107	1034	1104	1162	668
95°	802	816	837	805	811	626
105°	352	365	363	360	357	388
115°	28	28	28	26	28	44
125°	23	23	23	23	23	20
135°	29	29	29	29	29	23
145°	31	31	31	31	31	19
155°	22	22	22	22	22	11
165°	23	22	22	22	22	7
175°	22	22	22	22	22	2
180°	22	22	22	22	22	



TEST NUMBER: P381653

CATALOG NUMBER: BMK-70-WCL-UNV-L750-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	16416.6	16416.6	16416.6	16416.6	16416.6
2.5°	16310.4	16191.9	16239.6	16276.6	16215.0
5°	17226.3	17160.1	17255.6	17212.4	17120.1
7.5°	17937.5	17660.4	17672.7	17605.0	17412.6
10°	17908.2	17694.3	17665.0	17828.2	17868.2
12.5°	17169.3	17104.7	17146.3	17212.4	17189.4
15°	16816.8	16772.2	16612.1	16727.6	16676.8
17.5°	16958.5	16836.9	16793.8	16978.5	16946.2
20°	17504.9	17441.8	17532.6	17546.5	17360.2
22.5°	18340.8	18259.2	18399.2	18246.9	18091.4
25°	18416.2	18443.9	18517.8	18551.6	18280.7
27.5°	18205.3	18256.1	18174.5	18310.0	18088.3
30°	18303.8	18317.7	18243.8	18288.4	18205.3
32.5°	18662.5	18659.4	18585.5	18767.1	18731.7
35°	19349.0	19384.4	19352.1	19369.0	19324.4
37.5°	20075.5	19886.2	19900.1	19918.5	19947.8
40°	19624.5	19689.2	19603.0	19760.0	19747.7
42.5°	19267.4	19476.8	19412.1	19398.3	19424.4
45°	19349.0	19409.0	19441.4	19432.1	19561.4
47.5°	19549.1	19578.4	19593.7	19492.2	19547.6
50°	19567.6	19409.0	19496.8	19413.6	19509.1
52.5°	18556.3	18508.5	18423.9	18631.7	18580.9
55°	17215.5	17123.2	17127.8	17089.3	17384.9
57.5°	16004.1	15702.4	15787.1	15757.8	15810.1
60°	14301.6	13990.7	14004.5	14069.2	14167.7
62.5°	12497.6	12476.0	12302.1	12440.6	12519.1
65°	10602.7	10581.1	10547.3	10562.7	10619.6
67.5°	8974.1	8732.4	8781.7	8746.3	8804.8
70°	7379.4	7282.4	7267.0	7274.7	7308.6
72.5°	6180.3	6078.7	6091.0	6051.0	6106.4
75°	4936.5	4887.3	4930.4	4885.7	4907.3
77.5°	4000.6	3982.2	3992.9	3966.8	3996.0
80°	3243.3	3231.0	3234.1	3237.1	3294.1
82.5°	2589.1	2575.2	2527.5	2581.4	2604.5
85°	2059.6	2027.3	1987.2	2036.5	2110.4
87.5°	1622.4	1559.3	1530.1	1580.9	1630.1
90°	1159.1	1106.8	1034.4	1103.7	1162.2
92.5°	935.9	948.2	915.9	929.7	957.4
95°	802.0	815.8	837.4	805.1	811.2
97.5°	720.4	721.9	721.9	720.4	723.5
100°	611.1	617.3	620.3	618.8	614.2
102.5°	509.5	514.1	501.8	506.4	503.4
105°	352.5	364.8	363.3	360.2	357.1
107.5°	229.4	229.4	224.7	229.4	238.6
110°	124.7	121.6	118.5	123.1	127.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	57.0	58.5	60.0	57.0	57.0
115°	27.7	27.7	27.7	26.2	27.7
117.5°	18.5	18.5	18.5	18.5	18.5
120°	18.5	18.5	18.5	18.5	20.0
122.5°	20.0	21.6	20.0	21.6	21.6
125°	23.1	23.1	23.1	23.1	23.1
127.5°	24.6	24.6	24.6	24.6	24.6
130°	26.2	26.2	26.2	26.2	26.2
132.5°	27.7	27.7	27.7	27.7	27.7
135°	29.2	29.2	29.2	29.2	29.2
137.5°	30.8	30.8	30.8	30.8	30.8
140°	32.3	30.8	30.8	32.3	30.8
142.5°	32.3	30.8	30.8	32.3	30.8
145°	30.8	30.8	30.8	30.8	30.8
147.5°	29.2	29.2	29.2	29.2	27.7
150°	26.2	26.2	26.2	26.2	26.2
152.5°	24.6	23.1	23.1	23.1	23.1
155°	21.6	21.6	21.6	21.6	21.6
157.5°	21.6	21.6	21.6	21.6	21.6
160°	23.1	21.6	21.6	21.6	21.6
162.5°	23.1	21.6	21.6	21.6	21.6
165°	23.1	21.6	21.6	21.6	21.6
167.5°	23.1	21.6	21.6	21.6	21.6
170°	23.1	21.6	21.6	21.6	21.6
172.5°	21.6	21.6	21.6	21.6	21.6
175°	21.6	21.6	21.6	21.6	21.6
177.5°	21.6	21.6	21.6	21.6	23.1
180°	21.6	21.6	21.6	21.6	21.6

(END OF REPORT)