

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: P381651

Luminaire Tested: **BMK-70-WCL-UNV-L735-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: P381651  
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-L735-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: 75512.2 lumens  
Efficiency: N/A  
Efficacy: 150.8 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

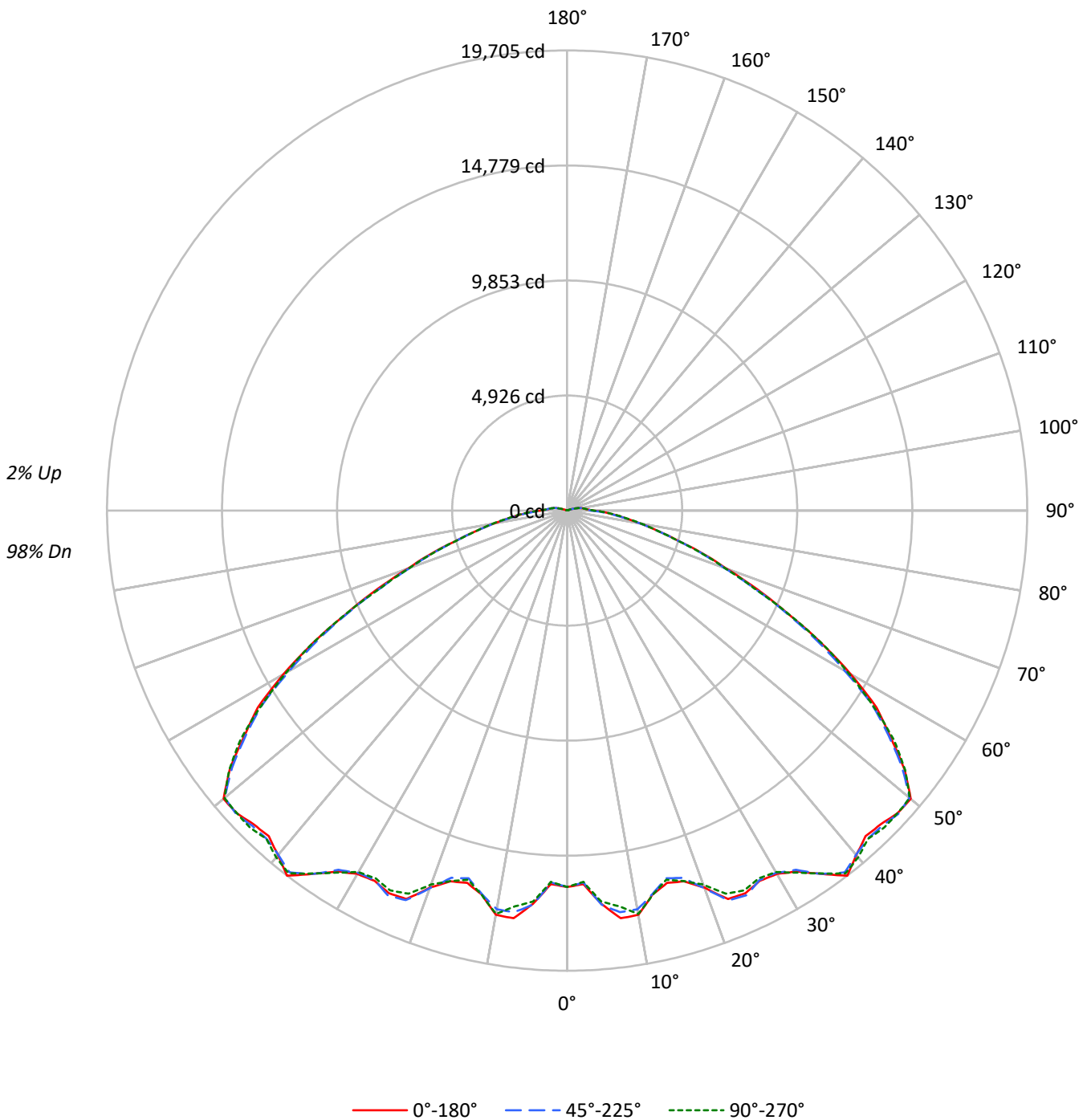
Input Watts (W): 500.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	124282	124282	124282
5°	129556	129776	128758
10°	134826	132996	134525
15°	127717	126162	126653
20°	135152	135366	134035
25°	145719	146523	144647
30°	149687	149196	148881
35°	165024	165050	164814
40°	176279	176086	177386
45°	185060	185943	187092
50°	201751	201021	201148
55°	194122	193133	196031
60°	179434	175707	177753
65°	151211	150422	151454
70°	122994	121121	121813
75°	99885	99761	99293
80°	84309	84068	85631
85°	75652	72995	77520



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1625.5	2.2
10°-20°	4751.8	6.3
20°-30°	8279.9	11.0
30°-40°	11883.6	15.7
40°-50°	14816.9	19.6
50°-60°	14979.8	19.8
60°-70°	10303.1	13.6
70°-80°	5241.0	6.9
80°-90°	2232.9	3.0
90°-100°	892.7	1.2
100°-110°	382.8	0.5
110°-120°	43.0	0.1
120°-130°	20.0	0.0
130°-140°	22.1	0.0
140°-150°	18.5	0.0
150°-160°	10.3	0.0
160°-170°	6.1	0.0
170°-180°	2.0	0.0
0°-30°	14657.3	19.4
0°-40°	26540.9	35.1
0°-60°	56337.5	74.6
0°-90°	74114.6	98.1
90°-120°	1318.6	1.7
90°-150°	1379.2	1.8
90°-180°	1398.0	1.9
0°-180°	75512.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	16113	16113	16113	16113	16113	
5°	16908	16843	16937	16894	16804	###
15°	16506	16462	16305	16419	16369	4769
25°	18076	18103	18176	18209	17943	8281
35°	18992	19026	18995	19011	18967	11900
45°	18992	19050	19082	19073	19200	14779
55°	16898	16807	16811	16774	17064	15083
65°	10407	10386	10352	10368	10424	10410
75°	4845	4797	4839	4796	4817	5287
85°	2022	1990	1950	1999	2071	1892
90°	1138	1086	1015	1083	1141	656
95°	787	801	822	790	796	614
105°	346	358	357	354	350	381
115°	27	27	27	26	27	43
125°	23	23	23	23	23	20
135°	29	29	29	29	29	22
145°	30	30	30	30	30	19
155°	21	21	21	21	21	11
165°	23	21	21	21	21	6
175°	21	21	21	21	21	2
180°	21	21	21	21	21	



TEST NUMBER: P381651

CATALOG NUMBER: BMK-70-WCL-UNV-L735-CD-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	16113.4	16113.4	16113.4	16113.4	16113.4
2.5°	16009.1	15892.8	15939.6	15975.9	15915.5
5°	16908.1	16843.1	16936.8	16894.5	16803.9
7.5°	17606.1	17334.2	17346.3	17279.8	17090.9
10°	17577.4	17367.4	17338.7	17498.8	17538.1
12.5°	16852.2	16788.7	16829.5	16894.5	16871.8
15°	16506.2	16462.4	16305.3	16418.6	16368.7
17.5°	16645.2	16525.9	16483.5	16664.9	16633.1
20°	17181.6	17119.6	17208.8	17222.4	17039.5
22.5°	18002.0	17921.9	18059.4	17909.8	17757.2
25°	18076.0	18103.2	18175.7	18209.0	17943.0
27.5°	17869.0	17918.9	17838.8	17971.8	17754.2
30°	17965.7	17979.3	17906.8	17950.6	17869.0
32.5°	18317.7	18314.7	18242.2	18420.5	18385.7
35°	18991.6	19026.3	18994.6	19011.2	18967.4
37.5°	19704.7	19518.9	19532.5	19550.6	19579.3
40°	19262.0	19325.5	19240.9	19395.0	19382.9
42.5°	18911.5	19117.0	19053.5	19039.9	19065.6
45°	18991.6	19050.5	19082.2	19073.2	19200.1
47.5°	19188.0	19216.7	19231.8	19132.1	19186.5
50°	19206.1	19050.5	19136.6	19055.0	19148.7
52.5°	18213.5	18166.7	18083.6	18287.5	18237.7
55°	16897.5	16806.9	16811.4	16773.6	17063.7
57.5°	15708.5	15412.3	15495.4	15466.7	15518.1
60°	14037.5	13732.3	13745.9	13809.3	13906.0
62.5°	12266.7	12245.6	12074.8	12210.8	12287.9
65°	10406.8	10385.7	10352.5	10367.6	10423.5
67.5°	8808.3	8571.1	8619.5	8584.7	8642.2
70°	7243.1	7147.9	7132.8	7140.4	7173.6
72.5°	6066.1	5966.4	5978.5	5939.2	5993.6
75°	4845.3	4797.0	4839.3	4795.5	4816.6
77.5°	3926.7	3908.6	3919.2	3893.5	3922.2
80°	3183.4	3171.3	3174.3	3177.4	3233.3
82.5°	2541.3	2527.7	2480.8	2533.7	2556.4
85°	2021.5	1989.8	1950.5	1998.9	2071.4
87.5°	1592.5	1530.5	1501.8	1551.7	1600.0
90°	1137.7	1086.3	1015.3	1083.3	1140.7
92.5°	918.6	930.7	899.0	912.6	939.8
95°	787.2	800.8	821.9	790.2	796.2
97.5°	707.1	708.6	708.6	707.1	710.1
100°	599.8	605.9	608.9	607.4	602.8
102.5°	500.1	504.6	492.5	497.1	494.1
105°	346.0	358.1	356.6	353.5	350.5
107.5°	225.1	225.1	220.6	225.1	234.2
110°	122.4	119.4	116.3	120.9	125.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	55.9	57.4	58.9	55.9	55.9
115°	27.2	27.2	27.2	25.7	27.2
117.5°	18.1	18.1	18.1	18.1	18.1
120°	18.1	18.1	18.1	18.1	19.6
122.5°	19.6	21.2	19.6	21.2	21.2
125°	22.7	22.7	22.7	22.7	22.7
127.5°	24.2	24.2	24.2	24.2	24.2
130°	25.7	25.7	25.7	25.7	25.7
132.5°	27.2	27.2	27.2	27.2	27.2
135°	28.7	28.7	28.7	28.7	28.7
137.5°	30.2	30.2	30.2	30.2	30.2
140°	31.7	30.2	30.2	31.7	30.2
142.5°	31.7	30.2	30.2	31.7	30.2
145°	30.2	30.2	30.2	30.2	30.2
147.5°	28.7	28.7	28.7	28.7	27.2
150°	25.7	25.7	25.7	25.7	25.7
152.5°	24.2	22.7	22.7	22.7	22.7
155°	21.2	21.2	21.2	21.2	21.2
157.5°	21.2	21.2	21.2	21.2	21.2
160°	22.7	21.2	21.2	21.2	21.2
162.5°	22.7	21.2	21.2	21.2	21.2
165°	22.7	21.2	21.2	21.2	21.2
167.5°	22.7	21.2	21.2	21.2	21.2
170°	22.7	21.2	21.2	21.2	21.2
172.5°	21.2	21.2	21.2	21.2	21.2
175°	21.2	21.2	21.2	21.2	21.2
177.5°	21.2	21.2	21.2	21.2	22.7
180°	21.2	21.2	21.2	21.2	21.2

(END OF REPORT)