

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: P381646

Luminaire Tested: **BMK-60-WCL-UNV-L740-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: P381646  
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-60-WCL-UNV-L740-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: 65021.1 lumens  
Efficiency: N/A  
Efficacy: 160.3 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

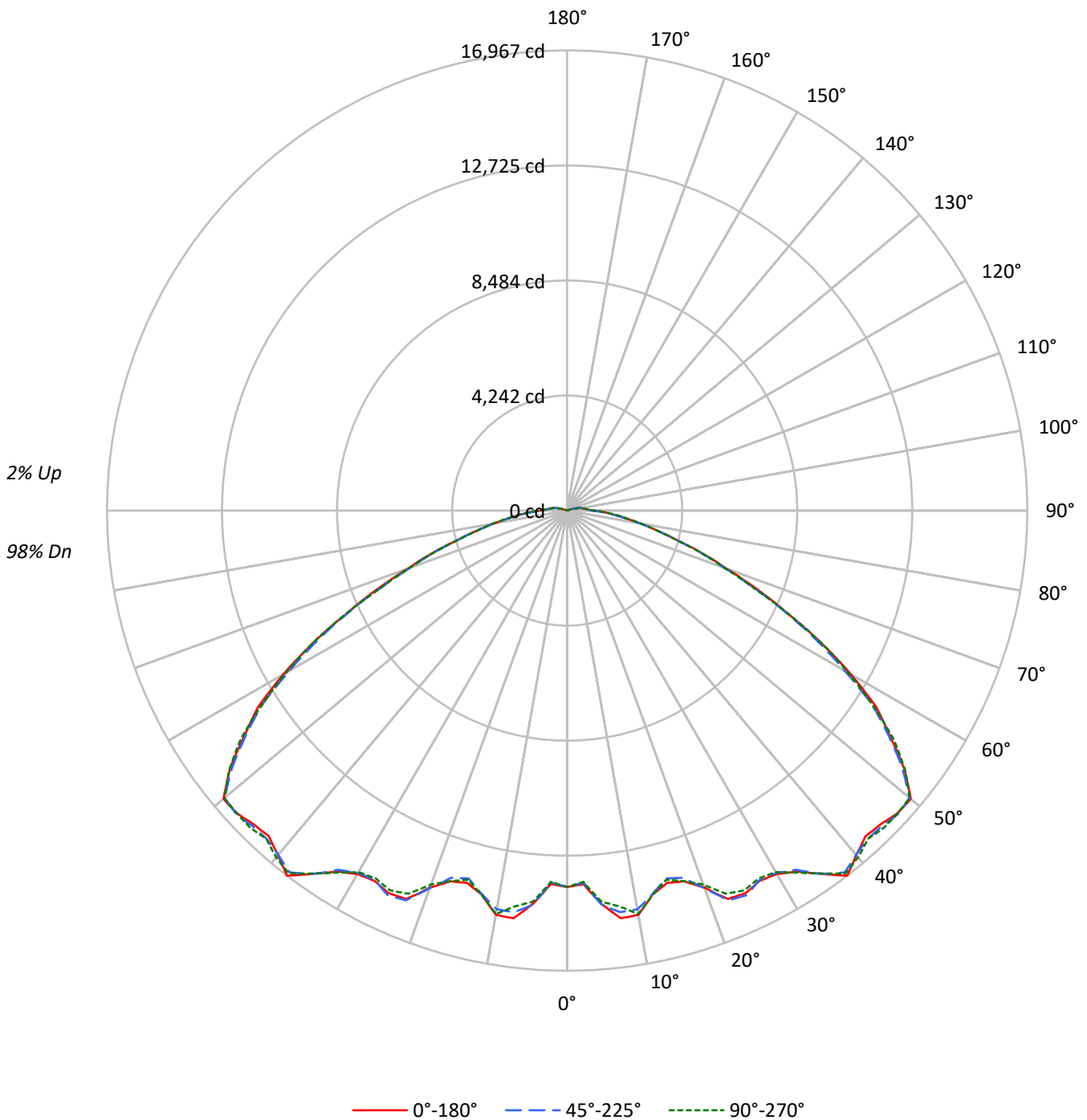
Input Watts (W): 405.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	107015	107015	107015
5°	111556	111746	110869
10°	116094	114518	115835
15°	109973	108634	109057
20°	116375	116559	115413
25°	125474	126166	124551
30°	128890	128468	128196
35°	142096	142119	141916
40°	151789	151622	152741
45°	159349	160110	161099
50°	173722	173092	173202
55°	167152	166301	168796
60°	154504	151295	153057
65°	130204	129524	130411
70°	105906	104293	104889
75°	86009	85902	85500
80°	72595	72389	73731
85°	65144	62853	66749



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1399.7	2.2
10°-20°	4091.7	6.3
20°-30°	7129.6	11.0
30°-40°	10232.6	15.7
40°-50°	12758.4	19.6
50°-60°	12898.6	19.8
60°-70°	8871.7	13.6
70°-80°	4512.8	6.9
80°-90°	1922.7	3.0
90°-100°	768.7	1.2
100°-110°	329.6	0.5
110°-120°	37.1	0.1
120°-130°	17.2	0.0
130°-140°	19.0	0.0
140°-150°	16.0	0.0
150°-160°	8.9	0.0
160°-170°	5.2	0.0
170°-180°	1.7	0.0
0°-30°	12620.9	19.4
0°-40°	22853.5	35.1
0°-60°	48510.5	74.6
0°-90°	63817.7	98.1
90°-120°	1135.4	1.7
90°-150°	1187.5	1.8
90°-180°	1203.0	1.9
0°-180°	65021.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	13875	13875	13875	13875	13875	
5°	14559	14503	14584	14547	14469	###
15°	14213	14175	14040	14138	14095	4107
25°	15565	15588	15650	15679	15450	7131
35°	16353	16383	16356	16370	16332	10247
45°	16353	16404	16431	16423	16533	12726
55°	14550	14472	14476	14443	14693	12987
65°	8961	8943	8914	8927	8975	8963
75°	4172	4130	4167	4129	4148	4552
85°	1741	1713	1680	1721	1784	1629
90°	980	935	874	933	982	565
95°	678	690	708	680	686	529
105°	298	308	307	304	302	328
115°	23	23	23	22	23	37
125°	20	20	20	20	20	17
135°	25	25	25	25	25	19
145°	26	26	26	26	26	16
155°	18	18	18	18	18	9
165°	20	18	18	18	18	6
175°	18	18	18	18	18	2
180°	18	18	18	18	18	



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CATALOG NUMBER: BMK-60-WCL-UNV-L740-CD-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	13874.7	13874.7	13874.7	13874.7	13874.7
2.5°	13784.9	13684.8	13725.1	13756.3	13704.3
5°	14559.0	14503.1	14583.7	14547.3	14469.3
7.5°	15160.1	14925.9	14936.3	14879.1	14716.4
10°	15135.3	14954.5	14929.8	15067.7	15101.5
12.5°	14510.9	14456.2	14491.4	14547.3	14527.8
15°	14213.0	14175.2	14039.9	14137.5	14094.6
17.5°	14332.7	14229.9	14193.5	14349.6	14322.2
20°	14794.5	14741.2	14817.9	14829.6	14672.2
22.5°	15500.9	15432.0	15550.3	15421.6	15290.2
25°	15564.7	15588.1	15650.5	15679.1	15450.2
27.5°	15386.4	15429.4	15360.4	15474.9	15287.6
30°	15469.7	15481.4	15419.0	15456.7	15386.4
32.5°	15772.8	15770.2	15707.8	15861.3	15831.4
35°	16353.0	16383.0	16355.6	16370.0	16332.2
37.5°	16967.1	16807.1	16818.8	16834.4	16859.1
40°	16585.9	16640.6	16567.7	16700.4	16690.0
42.5°	16284.1	16461.0	16406.4	16394.7	16416.8
45°	16353.0	16403.8	16431.1	16423.3	16532.6
47.5°	16522.2	16546.9	16559.9	16474.0	16520.9
50°	16537.8	16403.8	16477.9	16407.7	16488.3
52.5°	15683.0	15642.7	15571.2	15746.8	15703.9
55°	14549.9	14471.9	14475.8	14443.2	14693.0
57.5°	13526.1	13271.1	13342.6	13317.9	13362.1
60°	12087.2	11824.4	11836.1	11890.8	11974.0
62.5°	10562.5	10544.3	10397.3	10514.3	10580.7
65°	8961.0	8942.8	8914.2	8927.2	8975.3
67.5°	7584.6	7380.3	7422.0	7392.0	7441.5
70°	6236.8	6154.8	6141.8	6148.3	6176.9
72.5°	5223.3	5137.5	5147.9	5114.1	5160.9
75°	4172.2	4130.5	4167.0	4129.2	4147.5
77.5°	3381.2	3365.6	3374.7	3352.6	3377.3
80°	2741.1	2730.7	2733.3	2735.9	2784.0
82.5°	2188.2	2176.5	2136.2	2181.7	2201.2
85°	1740.7	1713.4	1679.5	1721.2	1783.6
87.5°	1371.2	1317.9	1293.2	1336.1	1377.7
90°	979.6	935.4	874.2	932.8	982.2
92.5°	791.0	801.4	774.1	785.8	809.2
95°	677.8	689.5	707.7	680.4	685.6
97.5°	608.8	610.1	610.1	608.8	611.5
100°	516.5	521.7	524.3	523.0	519.1
102.5°	430.6	434.5	424.1	428.0	425.4
105°	297.9	308.3	307.0	304.4	301.8
107.5°	193.8	193.8	189.9	193.8	201.6
110°	105.4	102.8	100.2	104.1	108.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	48.1	49.4	50.7	48.1	48.1
115°	23.4	23.4	23.4	22.1	23.4
117.5°	15.6	15.6	15.6	15.6	15.6
120°	15.6	15.6	15.6	15.6	16.9
122.5°	16.9	18.2	16.9	18.2	18.2
125°	19.5	19.5	19.5	19.5	19.5
127.5°	20.8	20.8	20.8	20.8	20.8
130°	22.1	22.1	22.1	22.1	22.1
132.5°	23.4	23.4	23.4	23.4	23.4
135°	24.7	24.7	24.7	24.7	24.7
137.5°	26.0	26.0	26.0	26.0	26.0
140°	27.3	26.0	26.0	27.3	26.0
142.5°	27.3	26.0	26.0	27.3	26.0
145°	26.0	26.0	26.0	26.0	26.0
147.5°	24.7	24.7	24.7	24.7	23.4
150°	22.1	22.1	22.1	22.1	22.1
152.5°	20.8	19.5	19.5	19.5	19.5
155°	18.2	18.2	18.2	18.2	18.2
157.5°	18.2	18.2	18.2	18.2	18.2
160°	19.5	18.2	18.2	18.2	18.2
162.5°	19.5	18.2	18.2	18.2	18.2
165°	19.5	18.2	18.2	18.2	18.2
167.5°	19.5	18.2	18.2	18.2	18.2
170°	19.5	18.2	18.2	18.2	18.2
172.5°	18.2	18.2	18.2	18.2	18.2
175°	18.2	18.2	18.2	18.2	18.2
177.5°	18.2	18.2	18.2	18.2	19.5
180°	18.2	18.2	18.2	18.2	18.2

(END OF REPORT)