

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: P381700

Luminaire Tested: **BMK-60-MFL-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: P381700
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-5)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-60-MFL-UNV-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH MEDIUM FROSTED LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 61950.8 lumens
Efficiency: N/A
Efficacy: 152.7 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.36 / 1.38
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

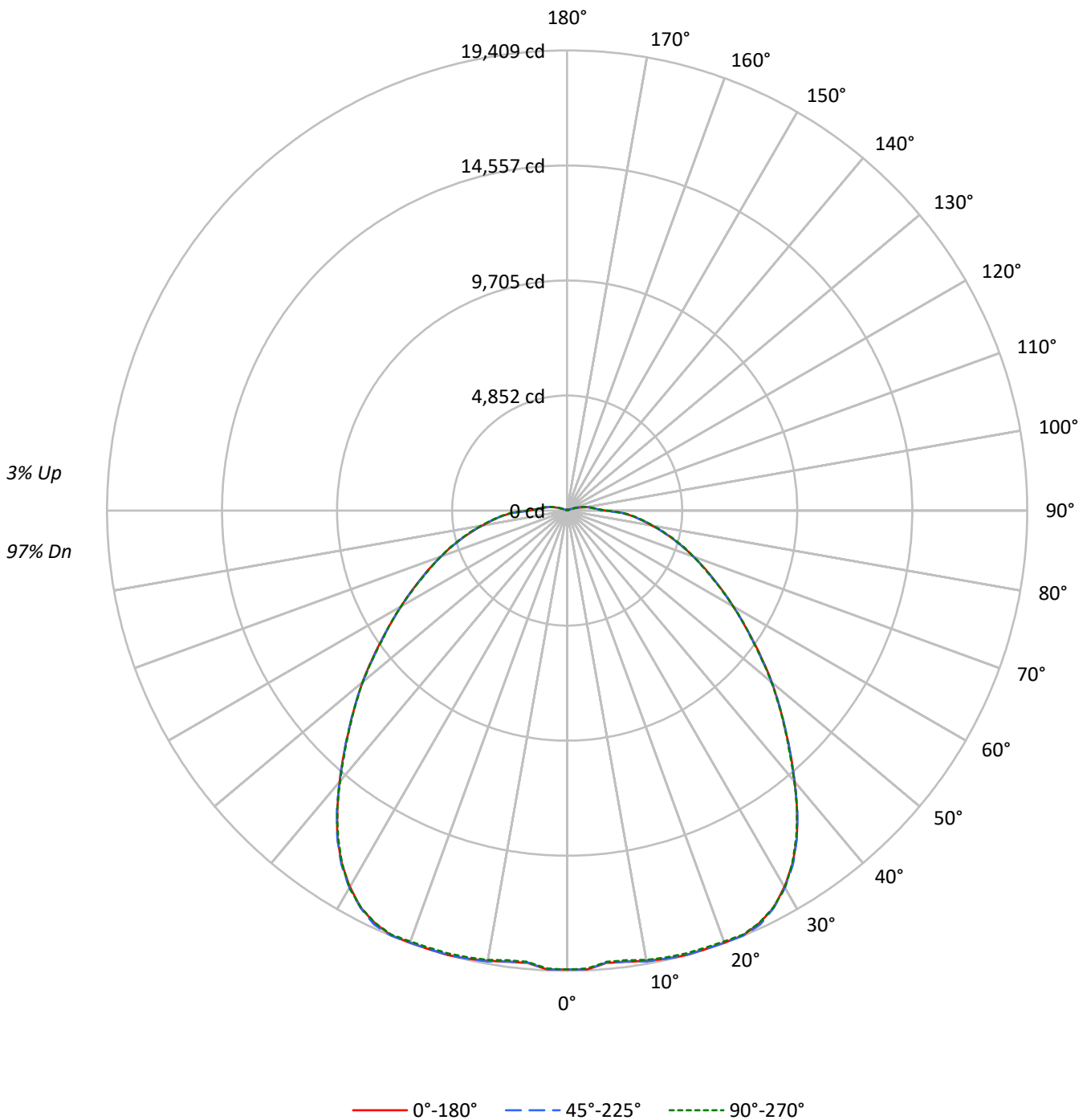
Input Watts (W): 405.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P381700

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

Luminous Intensity Polar Plot





TEST NUMBER: P381700

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

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	104	104	104	99	99	99	97
1	107	101	97	92	104	99	95	91	94	90	87	89	87	84	85	83	81	78
2	97	88	81	75	94	86	79	74	82	76	71	78	73	69	75	71	67	65
3	88	77	69	62	85	76	68	61	72	65	60	69	63	58	66	61	57	55
4	81	69	60	53	78	67	59	52	64	57	51	61	55	50	59	53	49	47
5	74	61	52	45	72	60	51	45	57	50	44	55	49	43	53	47	43	40
6	69	55	46	40	67	54	46	39	52	44	39	50	43	38	48	42	38	35
7	64	50	41	35	62	49	41	35	47	40	34	46	39	34	44	38	33	31
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	40	34	30	28
9	55	42	34	28	54	41	33	28	40	33	28	39	32	27	37	31	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	149259	149259	149259
5°	146724	146605	146406
10°	147907	148126	147598
15°	150176	150156	149653
20°	152550	152519	152100
25°	154755	155311	154639
30°	152660	153007	153039
35°	146754	146765	146335
40°	136644	136608	136299
45°	126642	126807	126515
50°	118374	118278	118141
55°	109955	109671	109477
60°	103434	103351	103434
65°	98787	98579	98181
70°	96228	96008	96296
75°	95127	95207	96092
80°	96129	96990	97885
85°	104042	104528	106332



TEST NUMBER: P381700

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1834.1	3.0
10°-20°	5489.2	8.9
20°-30°	8820.5	14.2
30°-40°	10501.7	17.0
40°-50°	10059.6	16.2
50°-60°	8582.6	13.9
60°-70°	6750.5	10.9
70°-80°	4899.2	7.9
80°-90°	2993.9	4.8
90°-100°	1263.1	2.0
100°-110°	567.1	0.9
110°-120°	85.8	0.1
120°-130°	26.0	0.0
130°-140°	28.9	0.0
140°-150°	24.5	0.0
150°-160°	13.5	0.0
160°-170°	7.8	0.0
170°-180°	2.6	0.0
0°-30°	16143.8	26.1
0°-40°	26645.5	43.0
0°-60°	45287.8	73.1
0°-90°	59931.4	96.7
90°-120°	1916.0	3.1
90°-150°	1995.4	3.2
90°-180°	2019.0	3.3
0°-180°	61950.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	19352	19352	19352	19352	19352	
5°	19149	19110	19133	19155	19107	###
15°	19409	19343	19406	19435	19341	5493
25°	19197	19192	19266	19249	19182	8816
35°	16889	16864	16890	16908	16841	10499
45°	12996	13038	13013	13019	12984	10059
55°	9571	9575	9546	9537	9530	8599
65°	6799	6783	6784	6770	6757	6767
75°	4614	4638	4618	4612	4661	4888
85°	2780	2822	2793	2792	2841	2437
90°	1602	1604	1451	1577	1638	936
95°	1127	1151	1138	1130	1142	863
105°	522	535	531	532	539	559
115°	56	58	58	57	56	83
125°	29	30	29	29	30	26
135°	38	38	38	38	38	29
145°	40	40	40	40	39	25
155°	27	29	27	27	27	14
165°	29	27	27	27	27	8
175°	27	27	27	27	29	3
180°	27	27	27	27	27	



TEST NUMBER: P381700

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	19351.7	19351.7	19351.7	19351.7	19351.7
2.5°	19372.5	19323.0	19364.7	19379.0	19327.0
5°	19148.7	19109.7	19133.1	19155.2	19107.1
7.5°	19195.6	19134.4	19181.2	19193.0	19124.0
10°	19282.7	19280.1	19311.3	19298.3	19242.4
12.5°	19354.3	19324.3	19358.2	19363.4	19302.2
15°	19408.9	19342.6	19406.3	19434.9	19341.3
17.5°	19392.0	19323.0	19395.9	19434.9	19337.4
20°	19393.3	19311.3	19389.4	19418.0	19336.1
22.5°	19386.8	19337.4	19403.7	19436.2	19362.1
25°	19196.9	19191.7	19265.8	19248.9	19182.5
27.5°	18867.7	18840.4	18883.3	18900.2	18854.7
30°	18322.6	18304.4	18364.2	18396.8	18368.1
32.5°	17682.5	17679.9	17717.7	17689.1	17657.8
35°	16889.0	16864.2	16890.3	16908.5	16840.8
37.5°	15921.1	15923.7	15957.5	15906.7	15932.8
40°	14931.0	14946.6	14927.1	14912.8	14893.3
42.5°	13943.6	13957.9	13944.9	13941.0	13895.5
45°	12996.5	13038.1	13013.4	13018.6	12983.5
47.5°	12114.5	12127.5	12124.9	12105.4	12098.9
50°	11268.9	11259.7	11259.7	11211.6	11246.7
52.5°	10406.3	10408.9	10356.9	10341.3	10381.6
55°	9571.1	9575.0	9546.4	9537.3	9529.5
57.5°	8800.9	8794.4	8800.9	8773.6	8819.2
60°	8091.9	8088.0	8085.4	8062.0	8091.9
62.5°	7431.0	7418.0	7411.5	7398.5	7412.8
65°	6798.8	6783.2	6784.5	6770.2	6757.1
67.5°	6221.2	6209.4	6202.9	6200.3	6187.3
70°	5666.9	5659.1	5653.9	5640.9	5670.9
72.5°	5136.2	5140.1	5121.9	5110.1	5172.6
75°	4614.5	4637.9	4618.4	4611.9	4661.3
77.5°	4112.3	4151.3	4127.9	4125.3	4167.0
80°	3629.7	3675.2	3662.2	3650.5	3696.0
82.5°	3191.2	3242.0	3223.8	3208.1	3248.5
85°	2780.1	2821.8	2793.1	2791.8	2841.3
87.5°	2332.6	2370.3	2309.2	2341.7	2383.3
90°	1601.5	1604.1	1450.6	1576.8	1637.9
92.5°	1291.8	1316.6	1287.9	1294.4	1307.5
95°	1126.6	1151.3	1138.3	1130.5	1142.2
97.5°	978.3	999.1	986.1	984.8	995.2
100°	830.0	844.3	832.6	836.5	844.3
102.5°	683.0	696.0	689.5	692.1	702.5
105°	521.7	534.7	530.8	532.1	538.6
107.5°	370.8	377.3	370.8	373.4	382.5
110°	231.6	238.1	227.7	234.2	245.9



TEST NUMBER: P381700

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

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	119.7	127.5	130.1	127.5	123.6
115°	55.9	58.5	58.5	57.2	55.9
117.5°	27.3	27.3	26.0	27.3	27.3
120°	23.4	24.7	23.4	23.4	24.7
122.5°	26.0	27.3	26.0	26.0	27.3
125°	28.6	29.9	28.6	28.6	29.9
127.5°	31.2	32.5	31.2	31.2	32.5
130°	33.8	33.8	33.8	33.8	33.8
132.5°	35.1	36.4	35.1	35.1	36.4
135°	37.7	37.7	37.7	37.7	37.7
137.5°	39.0	39.0	39.0	39.0	40.3
140°	40.3	40.3	40.3	40.3	40.3
142.5°	41.6	40.3	40.3	41.6	40.3
145°	40.3	40.3	40.3	40.3	39.0
147.5°	37.7	37.7	37.7	37.7	37.7
150°	33.8	33.8	33.8	33.8	33.8
152.5°	29.9	29.9	29.9	29.9	29.9
155°	27.3	28.6	27.3	27.3	27.3
157.5°	28.6	28.6	27.3	27.3	27.3
160°	28.6	28.6	27.3	27.3	27.3
162.5°	28.6	28.6	27.3	27.3	27.3
165°	28.6	27.3	27.3	27.3	27.3
167.5°	28.6	27.3	27.3	27.3	27.3
170°	28.6	28.6	27.3	27.3	27.3
172.5°	27.3	28.6	27.3	27.3	27.3
175°	27.3	27.3	27.3	27.3	28.6
177.5°	26.0	26.0	27.3	27.3	28.6
180°	27.3	27.3	27.3	27.3	27.3

(END OF REPORT)