

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: P381628

Luminaire Tested: **BMK-60-WFL-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: P381628
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-1)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-60-WFL-UNV-L740-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH WIDE FROSTED LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 64622.9 lumens
Efficiency: N/A
Efficacy: 159.3 lumens/watt
Spacing Criteria (0/90/45): 1.69 / 1.69 / 1.76
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

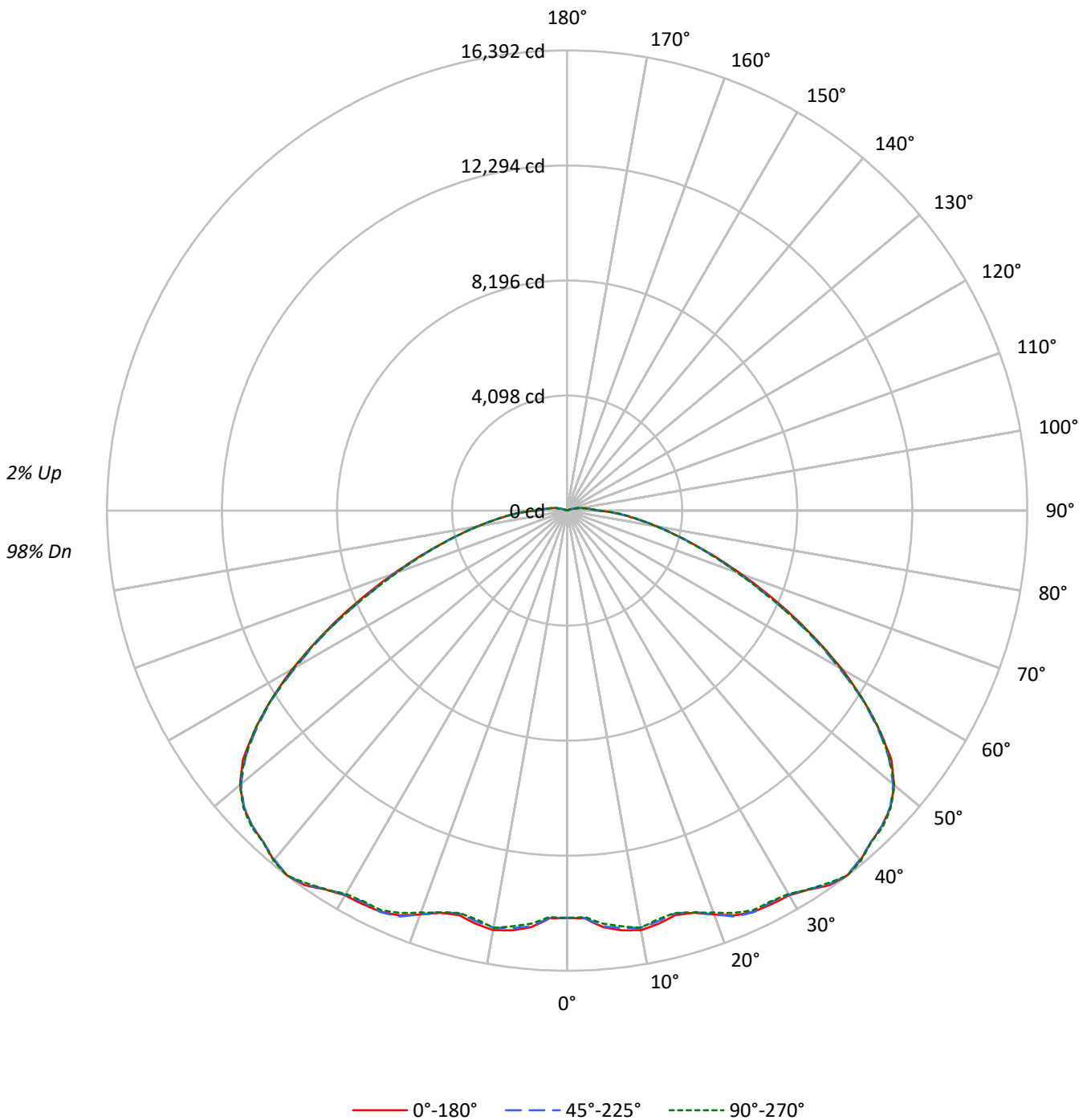
Input Watts (W): 405.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P381628

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

Luminous Intensity Polar Plot





TEST NUMBER: P381628

CATALOG NUMBER: BMK-60-WFL-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	119	119	119	119	116	116	116	116	110	110	110		105	105	105		100	100	100	98
1	107	102	97	93	104	99	95	91	95	91	88		90	87	85		86	84	82	79
2	96	88	80	74	94	85	79	73	81	76	71		78	73	69		74	70	67	65
3	87	76	67	60	85	74	66	59	71	64	58		68	62	57		65	60	56	53
4	79	66	57	50	77	65	56	49	62	55	48		60	53	48		57	51	47	44
5	73	59	49	42	70	58	49	42	55	47	41		53	46	40		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	37	31		43	36	30		41	35	30	28
8	57	43	34	28	55	42	33	27	40	33	27		39	32	27		38	31	26	24
9	53	39	30	24	51	38	30	24	37	29	24		36	29	24		34	28	24	22
10	49	36	27	22	48	35	27	22	34	27	22		33	26	21		32	26	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	111889	111889	111889
5°	114175	113916	113218
10°	116391	115712	115762
15°	115415	114943	114811
20°	120414	120404	119851
25°	127044	127149	126572
30°	131846	131618	131358
35°	141539	141245	140737
40°	148748	148499	148928
45°	154630	154680	155060
50°	159737	159245	159819
55°	155699	155027	155953
60°	144606	142726	143775
65°	128556	126496	127043
70°	111515	109990	109394
75°	96357	96197	95875
80°	85617	86203	85342
85°	79454	79649	80184



TEST NUMBER: P381628

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1423.3	2.2
10°-20°	4256.4	6.6
20°-30°	7252.6	11.2
30°-40°	10163.8	15.7
40°-50°	12235.5	18.9
50°-60°	11982.5	18.5
60°-70°	8685.8	13.4
70°-80°	5003.5	7.7
80°-90°	2344.1	3.6
90°-100°	840.7	1.3
100°-110°	319.6	0.5
110°-120°	45.7	0.1
120°-130°	17.2	0.0
130°-140°	19.1	0.0
140°-150°	16.4	0.0
150°-160°	9.4	0.0
160°-170°	5.5	0.0
170°-180°	1.9	0.0
0°-30°	12932.3	20.0
0°-40°	23096.0	35.7
0°-60°	47314.0	73.2
0°-90°	63347.4	98.0
90°-120°	1206.0	1.9
90°-150°	1258.7	1.9
90°-180°	1276.0	2.0
0°-180°	64622.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	14507	14507	14507	14507	14507	
5°	14901	14830	14867	14854	14776	###
15°	14916	14840	14855	14875	14838	4270
25°	15759	15730	15772	15735	15701	7265
35°	16289	16264	16255	16278	16196	10171
45°	15869	15926	15874	15866	15913	12235
55°	13553	13523	13494	13446	13575	12042
65°	8848	8764	8706	8690	8744	8781
75°	4674	4666	4666	4636	4651	5028
85°	2123	2154	2128	2127	2143	1958
90°	1129	1119	1043	1103	1130	657
95°	752	756	753	745	748	567
105°	285	289	294	291	288	317
115°	32	31	31	32	31	46
125°	20	20	20	20	20	17
135°	25	25	25	25	25	19
145°	27	26	27	27	26	17
155°	20	20	20	20	20	9
165°	20	20	20	20	20	6
175°	20	20	20	20	20	2
180°	20	20	20	20	20	



TEST NUMBER: P381628

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	14506.6	14506.6	14506.6	14506.6	14506.6
2.5°	14543.0	14501.4	14530.0	14546.9	14492.3
5°	14900.8	14830.5	14867.0	14854.0	14775.9
7.5°	15080.3	14990.6	14997.1	15003.6	14934.6
10°	15174.0	15097.2	15085.5	15125.8	15092.0
12.5°	15071.2	14971.0	14984.0	15010.1	14911.2
15°	14916.4	14839.6	14855.3	14874.8	14838.3
17.5°	15023.1	14968.4	14984.0	15008.8	15008.8
20°	15308.0	15259.8	15306.7	15284.6	15236.4
22.5°	15604.6	15573.4	15652.7	15582.5	15516.1
25°	15759.4	15729.5	15772.4	15734.7	15700.9
27.5°	15798.4	15762.0	15724.3	15743.8	15697.0
30°	15824.4	15829.6	15797.1	15817.9	15765.9
32.5°	16007.9	16035.2	15984.5	16052.1	16000.1
35°	16288.9	16264.2	16255.0	16278.5	16196.5
37.5°	16383.8	16346.1	16379.9	16381.2	16391.6
40°	16253.7	16210.8	16226.4	16235.5	16273.3
42.5°	16019.6	16043.0	16019.6	16007.9	16024.8
45°	15868.7	15925.9	15873.9	15866.1	15912.9
47.5°	15628.0	15664.4	15613.7	15609.8	15641.0
50°	15206.5	15155.8	15159.7	15175.3	15214.3
52.5°	14552.1	14470.2	14442.9	14423.3	14459.8
55°	13553.0	13523.1	13494.5	13446.4	13575.1
57.5°	12475.9	12380.9	12429.0	12388.7	12462.9
60°	11312.8	11215.3	11165.8	11177.5	11247.8
62.5°	10052.2	10026.2	9956.0	9963.8	10019.7
65°	8847.6	8764.3	8705.8	8690.2	8743.5
67.5°	7665.0	7558.4	7535.0	7490.7	7499.8
70°	6567.1	6505.9	6477.3	6456.5	6442.2
72.5°	5579.7	5545.8	5523.7	5510.7	5512.0
75°	4674.2	4666.4	4666.4	4636.5	4650.8
77.5°	3906.7	3941.8	3913.2	3889.8	3883.3
80°	3232.8	3273.1	3254.9	3232.8	3222.4
82.5°	2633.1	2677.3	2655.2	2646.1	2637.0
85°	2123.1	2154.3	2128.3	2127.0	2142.6
87.5°	1641.8	1653.5	1617.0	1637.9	1675.6
90°	1129.2	1118.8	1043.3	1103.2	1130.5
92.5°	895.0	902.8	888.5	885.9	892.4
95°	751.9	755.8	753.2	745.4	748.0
97.5°	627.0	634.9	630.9	627.0	627.0
100°	510.0	513.9	516.5	511.3	510.0
102.5°	399.4	402.0	400.7	402.0	400.7
105°	284.9	288.8	294.0	291.4	287.5
107.5°	193.8	195.1	193.8	196.4	197.7
110°	121.0	118.4	115.8	119.7	122.3



TEST NUMBER: P381628

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

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	65.0	63.7	66.3	65.0	62.4
115°	32.5	31.2	31.2	32.5	31.2
117.5°	18.2	18.2	16.9	18.2	18.2
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	27.3	27.3	27.3	26.0
142.5°	27.3	27.3	27.3	27.3	26.0
145°	27.3	26.0	27.3	27.3	26.0
147.5°	26.0	24.7	24.7	26.0	24.7
150°	23.4	23.4	23.4	23.4	23.4
152.5°	20.8	20.8	20.8	20.8	20.8
155°	19.5	19.5	19.5	19.5	19.5
157.5°	19.5	19.5	19.5	19.5	19.5
160°	19.5	19.5	19.5	19.5	19.5
162.5°	19.5	19.5	19.5	19.5	19.5
165°	19.5	19.5	19.5	19.5	19.5
167.5°	19.5	19.5	19.5	19.5	19.5
170°	19.5	19.5	19.5	19.5	19.5
172.5°	19.5	19.5	19.5	19.5	19.5
175°	19.5	19.5	19.5	19.5	19.5
177.5°	18.2	19.5	19.5	19.5	19.5
180°	19.5	19.5	19.5	19.5	19.5

(END OF REPORT)