

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: P381645

Luminaire Tested: **BMK-60-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: P381645
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-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: 64172.7 lumens
Efficiency: N/A
Efficacy: 158.2 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

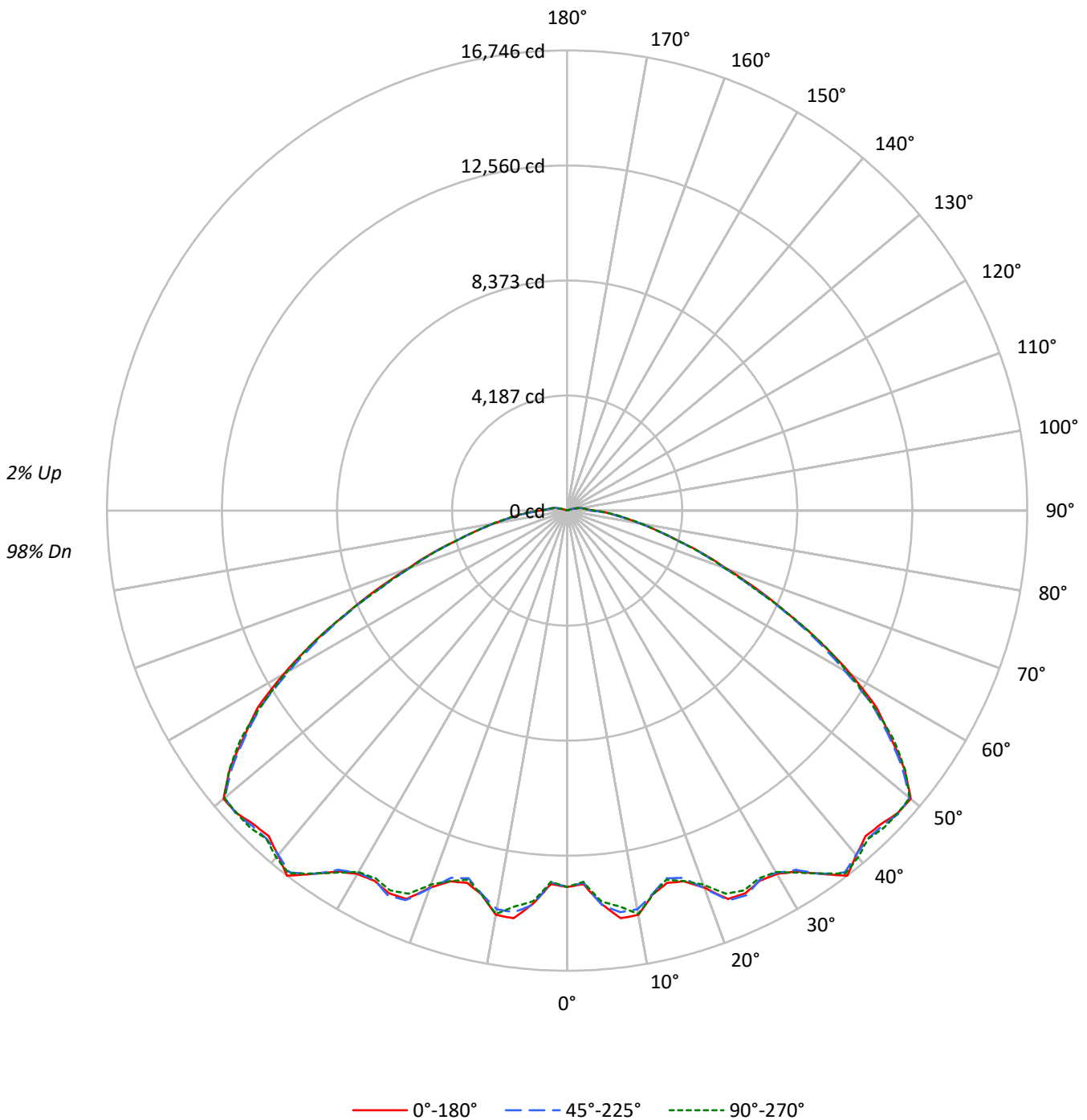
Input Watts (W): 405.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	105619	105619	105619
5°	110101	110288	109422
10°	114580	113024	114324
15°	108538	107216	107634
20°	114857	115039	113908
25°	123837	124520	122926
30°	127208	126792	126524
35°	140243	140265	140064
40°	149808	149644	150748
45°	157270	158021	158997
50°	171455	170834	170942
55°	164972	164131	166594
60°	152488	149321	151061
65°	128505	127834	128710
70°	104524	102932	103522
75°	84885	84780	84382
80°	71650	71443	72770
85°	64294	62034	65877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1381.4	2.2
10°-20°	4038.3	6.3
20°-30°	7036.5	11.0
30°-40°	10099.0	15.7
40°-50°	12591.9	19.6
50°-60°	12730.3	19.8
60°-70°	8755.9	13.6
70°-80°	4454.0	6.9
80°-90°	1897.6	3.0
90°-100°	758.6	1.2
100°-110°	325.3	0.5
110°-120°	36.6	0.1
120°-130°	17.0	0.0
130°-140°	18.8	0.0
140°-150°	15.8	0.0
150°-160°	8.8	0.0
160°-170°	5.1	0.0
170°-180°	1.7	0.0
0°-30°	12456.3	19.4
0°-40°	22555.3	35.1
0°-60°	47877.5	74.6
0°-90°	62985.0	98.1
90°-120°	1120.6	1.7
90°-150°	1172.1	1.8
90°-180°	1188.0	1.9
0°-180°	64172.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	13694	13694	13694	13694	13694	
5°	14369	14314	14394	14358	14280	###
15°	14028	13990	13857	13953	13911	4053
25°	15362	15385	15446	15475	15249	7038
35°	16140	16169	16142	16156	16119	10113
45°	16140	16190	16217	16209	16317	12560
55°	14360	14283	14287	14255	14501	12818
65°	8844	8826	8798	8811	8858	8846
75°	4118	4077	4113	4075	4093	4493
85°	1718	1691	1658	1699	1760	1608
90°	967	923	863	921	969	557
95°	669	680	698	672	677	522
105°	294	304	303	300	298	324
115°	23	23	23	22	23	37
125°	19	19	19	19	19	17
135°	24	24	24	24	24	19
145°	26	26	26	26	26	16
155°	18	18	18	18	18	9
165°	19	18	18	18	18	5
175°	18	18	18	18	18	2
180°	18	18	18	18	18	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	13693.7	13693.7	13693.7	13693.7	13693.7
2.5°	13605.1	13506.2	13546.0	13576.8	13525.5
5°	14369.1	14313.8	14393.5	14357.5	14280.5
7.5°	14962.3	14731.1	14741.4	14684.9	14524.4
10°	14937.9	14759.4	14735.0	14871.1	14904.5
12.5°	14321.5	14267.6	14302.3	14357.5	14338.2
15°	14027.5	13990.3	13856.7	13953.0	13910.7
17.5°	14145.6	14044.2	14008.3	14162.3	14135.4
20°	14601.5	14548.8	14624.6	14636.1	14480.8
22.5°	15298.7	15230.6	15347.5	15220.3	15090.7
25°	15361.6	15384.7	15446.3	15474.6	15248.6
27.5°	15185.7	15228.0	15160.0	15273.0	15088.1
30°	15267.8	15279.4	15217.8	15255.0	15185.7
32.5°	15567.0	15564.4	15502.8	15654.3	15624.8
35°	16139.7	16169.2	16142.2	16156.4	16119.1
37.5°	16745.7	16587.8	16599.3	16614.7	16639.1
40°	16369.5	16423.4	16351.5	16482.5	16472.2
42.5°	16071.6	16246.2	16192.3	16180.8	16202.6
45°	16139.7	16189.7	16216.7	16209.0	16316.9
47.5°	16306.6	16331.0	16343.8	16259.1	16305.3
50°	16322.0	16189.7	16262.9	16193.6	16273.2
52.5°	15478.4	15438.6	15368.0	15541.3	15499.0
55°	14360.1	14283.0	14286.9	14254.8	14501.3
57.5°	13349.6	13097.9	13168.5	13144.1	13187.8
60°	11929.5	11670.1	11681.7	11735.6	11817.8
62.5°	10424.7	10406.7	10261.6	10377.2	10442.6
65°	8844.1	8826.1	8797.9	8810.7	8858.2
67.5°	7485.6	7284.0	7325.1	7295.6	7344.4
70°	6155.4	6074.5	6061.7	6068.1	6096.4
72.5°	5155.2	5070.4	5080.7	5047.3	5093.6
75°	4117.7	4076.6	4112.6	4075.4	4093.3
77.5°	3337.1	3321.7	3330.7	3308.8	3333.2
80°	2705.4	2695.1	2697.6	2700.2	2747.7
82.5°	2159.7	2148.1	2108.3	2153.2	2172.5
85°	1718.0	1691.0	1657.6	1698.7	1760.3
87.5°	1353.3	1300.7	1276.3	1318.7	1359.7
90°	966.8	923.2	862.8	920.6	969.4
92.5°	780.7	790.9	764.0	775.5	798.6
95°	669.0	680.5	698.5	671.5	676.7
97.5°	600.9	602.2	602.2	600.9	603.5
100°	509.7	514.9	517.4	516.2	512.3
102.5°	425.0	428.9	418.6	422.4	419.9
105°	294.0	304.3	303.0	300.5	297.9
107.5°	191.3	191.3	187.5	191.3	199.0
110°	104.0	101.4	98.9	102.7	106.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	47.5	48.8	50.1	47.5	47.5
115°	23.1	23.1	23.1	21.8	23.1
117.5°	15.4	15.4	15.4	15.4	15.4
120°	15.4	15.4	15.4	15.4	16.7
122.5°	16.7	18.0	16.7	18.0	18.0
125°	19.3	19.3	19.3	19.3	19.3
127.5°	20.5	20.5	20.5	20.5	20.5
130°	21.8	21.8	21.8	21.8	21.8
132.5°	23.1	23.1	23.1	23.1	23.1
135°	24.4	24.4	24.4	24.4	24.4
137.5°	25.7	25.7	25.7	25.7	25.7
140°	27.0	25.7	25.7	27.0	25.7
142.5°	27.0	25.7	25.7	27.0	25.7
145°	25.7	25.7	25.7	25.7	25.7
147.5°	24.4	24.4	24.4	24.4	23.1
150°	21.8	21.8	21.8	21.8	21.8
152.5°	20.5	19.3	19.3	19.3	19.3
155°	18.0	18.0	18.0	18.0	18.0
157.5°	18.0	18.0	18.0	18.0	18.0
160°	19.3	18.0	18.0	18.0	18.0
162.5°	19.3	18.0	18.0	18.0	18.0
165°	19.3	18.0	18.0	18.0	18.0
167.5°	19.3	18.0	18.0	18.0	18.0
170°	19.3	18.0	18.0	18.0	18.0
172.5°	18.0	18.0	18.0	18.0	18.0
175°	18.0	18.0	18.0	18.0	18.0
177.5°	18.0	18.0	18.0	18.0	19.3
180°	18.0	18.0	18.0	18.0	18.0

(END OF REPORT)