

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: P381681

Luminaire Tested: **BMK-60-NFL-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: P381681
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-4)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-60-NFL-UNV-L735-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH NARROW FROSTED LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

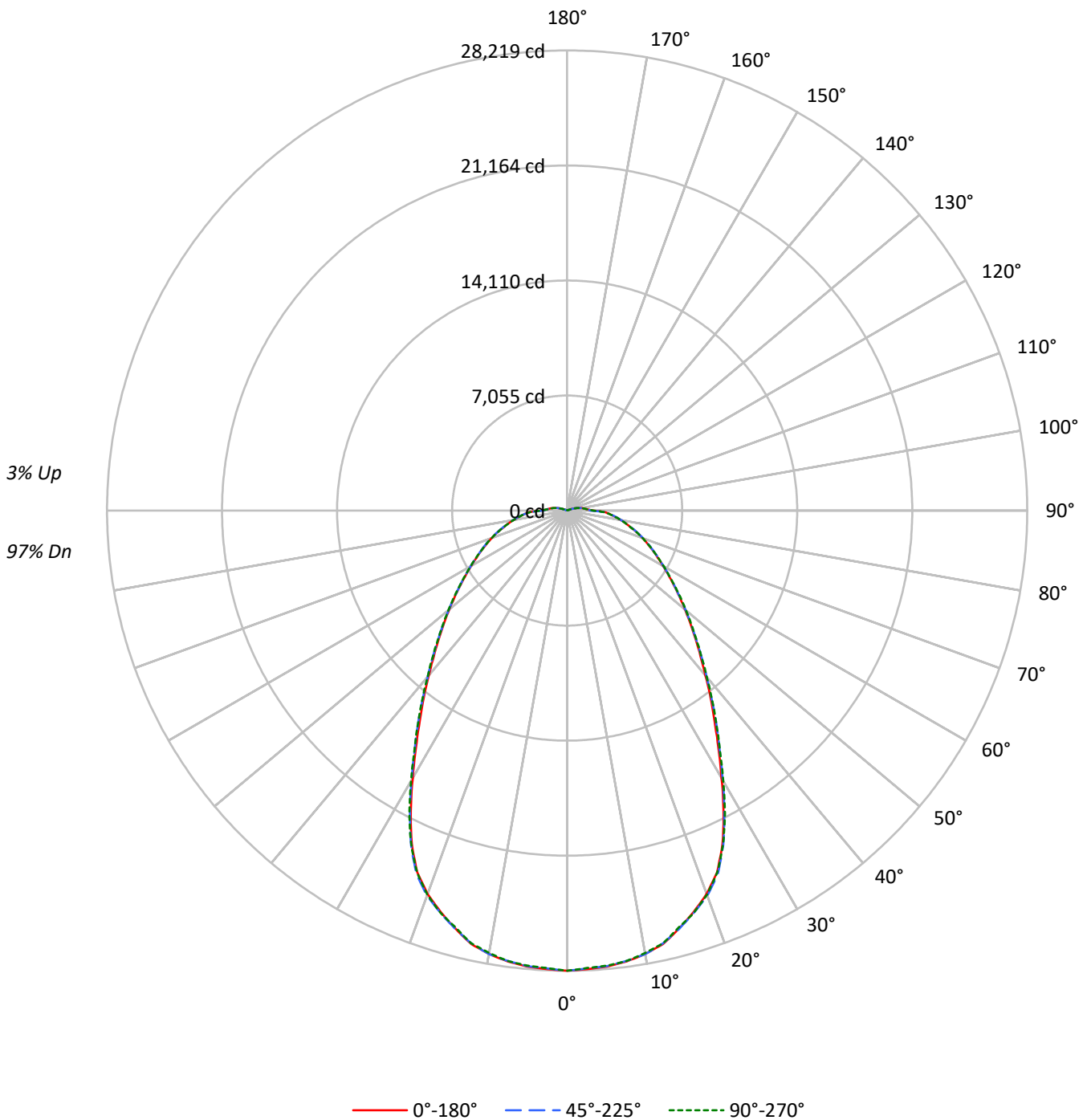
Lumens per Lamp: N/A
Luminaire Lumens: 61354.4 lumens
Efficiency: N/A
Efficacy: 151.2 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.1
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

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	50	30	10	0	
RCR																						
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	99	99	99	97	
1	107	102	98	94	104	100	96	92	95	91	88	90	88	85	86	84	82	86	84	82	80	
2	98	90	83	77	95	88	81	76	84	78	74	80	75	72	76	73	70	76	73	70	67	
3	90	80	72	65	87	78	70	65	74	68	63	71	66	61	68	64	60	68	64	60	58	
4	83	71	63	56	80	70	62	56	67	60	55	64	58	54	62	57	52	62	57	52	50	
5	77	64	56	49	75	63	55	49	61	54	48	58	52	47	56	51	46	56	51	46	44	
6	71	59	50	44	69	57	49	43	55	48	43	53	47	42	51	46	42	51	46	42	39	
7	67	54	45	39	65	53	45	39	51	44	38	49	43	38	47	42	37	47	42	37	36	
8	62	49	41	35	61	48	41	35	47	40	35	45	39	34	44	38	34	44	38	34	32	
9	58	46	38	32	57	45	37	32	43	37	32	42	36	31	41	35	31	41	35	31	29	
10	55	42	35	30	54	42	34	30	40	34	29	39	33	29	38	33	29	38	33	29	27	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	217652	217652	217652
5°	215113	214808	214601
10°	211735	211834	211272
15°	205271	205430	204744
20°	196765	197684	197149
25°	181726	182617	182400
30°	157738	158862	159386
35°	136783	138478	138568
40°	120689	121688	121899
45°	108386	109149	109312
50°	98998	99497	99848
55°	91837	92235	92412
60°	86739	87215	87478
65°	84213	84755	84437
70°	83658	84072	83571
75°	83984	84859	84065
80°	88377	89161	88208
85°	99899	100524	99416



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2662.1	4.3
10°-20°	7465.2	12.2
20°-30°	10281.1	16.8
30°-40°	9970.2	16.3
40°-50°	8676.4	14.1
50°-60°	7217.6	11.8
60°-70°	5793.2	9.4
70°-80°	4348.7	7.1
80°-90°	2839.7	4.6
90°-100°	1282.8	2.1
100°-110°	608.7	1.0
110°-120°	97.7	0.2
120°-130°	27.1	0.0
130°-140°	30.2	0.0
140°-150°	26.3	0.0
150°-160°	15.2	0.0
160°-170°	9.2	0.0
170°-180°	3.2	0.0
0°-30°	20408.3	33.3
0°-40°	30378.5	49.5
0°-60°	46272.4	75.4
0°-90°	59254.1	96.6
90°-120°	1989.2	3.2
90°-150°	2072.8	3.4
90°-180°	2100.0	3.4
0°-180°	61354.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	28219	28219	28219	28219	28219	
5°	28074	27982	28034	28080	28007	###
15°	26529	26441	26550	26569	26461	7463
25°	22543	22541	22653	22690	22626	10248
35°	15742	15793	15937	15937	15947	9899
45°	11123	11169	11201	11218	11218	8626
55°	7994	8009	8029	8048	8044	7187
65°	5796	5812	5833	5836	5811	5763
75°	4074	4097	4116	4098	4078	4337
85°	2669	2692	2686	2651	2656	2316
90°	1629	1577	1446	1551	1586	945
95°	1166	1170	1166	1141	1149	896
105°	584	580	576	569	568	617
115°	69	68	68	66	64	100
125°	30	31	30	31	32	26
135°	38	40	38	40	40	30
145°	44	42	42	42	42	26
155°	31	32	31	31	31	15
165°	33	33	32	32	32	9
175°	32	33	32	33	33	3
180°	33	33	33	33	33	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	28219.1	28219.1	28219.1	28219.1	28219.1
2.5°	28148.4	28072.7	28100.9	28149.7	28076.5
5°	28074.0	27981.5	28034.2	28080.4	28007.2
7.5°	27890.4	27795.3	27860.8	27935.3	27860.8
10°	27604.0	27518.0	27616.9	27625.9	27543.7
12.5°	27218.8	27123.8	27177.8	27211.1	27180.3
15°	26529.4	26440.8	26549.9	26569.2	26461.3
17.5°	25801.3	25770.5	25851.4	25897.6	25856.6
20°	25014.3	25036.1	25131.1	25141.4	25063.1
22.5°	24010.2	23992.2	24129.6	24112.9	24042.3
25°	22542.6	22541.3	22653.1	22690.3	22626.1
27.5°	20765.6	20723.2	20883.7	20883.7	20962.1
30°	18932.1	18906.4	19066.9	19077.2	19129.8
32.5°	17245.0	17288.6	17411.9	17438.9	17435.0
35°	15741.5	15792.8	15936.6	15936.6	15946.9
37.5°	14426.7	14466.5	14552.5	14597.4	14578.2
40°	13187.6	13240.3	13296.8	13348.1	13319.9
42.5°	12093.7	12125.8	12211.8	12246.5	12210.5
45°	11123.0	11169.2	11201.3	11218.0	11218.0
47.5°	10237.1	10244.8	10301.3	10302.6	10320.5
50°	9424.3	9403.8	9471.8	9452.6	9505.2
52.5°	8679.6	8683.5	8711.7	8723.3	8759.2
55°	7994.0	8009.4	8028.7	8047.9	8044.1
57.5°	7363.6	7388.0	7414.9	7429.0	7407.2
60°	6785.8	6830.7	6823.0	6856.4	6843.6
62.5°	6268.3	6310.7	6314.6	6331.2	6313.3
65°	5795.8	5812.5	5833.1	5835.6	5811.2
67.5°	5349.0	5364.4	5394.0	5387.5	5355.4
70°	4926.6	4933.0	4951.0	4953.6	4921.5
72.5°	4506.7	4510.6	4523.4	4520.9	4499.0
75°	4074.0	4097.1	4116.4	4098.4	4077.9
77.5°	3710.7	3713.2	3727.4	3700.4	3704.2
80°	3337.0	3352.4	3366.6	3325.5	3330.6
82.5°	3003.2	3019.9	3028.9	2978.8	2985.2
85°	2669.4	2692.5	2686.1	2651.4	2656.5
87.5°	2333.0	2307.3	2289.3	2275.2	2281.6
90°	1629.4	1576.7	1445.7	1551.0	1585.7
92.5°	1307.1	1326.3	1308.4	1287.8	1307.1
95°	1165.8	1169.7	1165.8	1141.4	1149.2
97.5°	1028.5	1038.7	1028.5	1004.1	1013.1
100°	883.4	885.9	879.5	864.1	870.5
102.5°	738.3	740.8	731.9	721.6	724.2
105°	584.2	580.4	576.5	568.8	567.5
107.5°	421.1	421.1	414.7	407.0	412.2
110°	276.1	272.2	258.1	260.6	263.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	146.4	147.7	150.2	142.5	137.4
115°	69.3	68.1	68.1	65.5	64.2
117.5°	30.8	30.8	28.2	29.5	30.8
120°	24.4	25.7	24.4	24.4	27.0
122.5°	27.0	28.2	27.0	28.2	29.5
125°	29.5	30.8	29.5	30.8	32.1
127.5°	32.1	33.4	32.1	33.4	33.4
130°	34.7	36.0	34.7	34.7	36.0
132.5°	36.0	37.2	37.2	37.2	37.2
135°	38.5	39.8	38.5	39.8	39.8
137.5°	41.1	41.1	41.1	41.1	41.1
140°	42.4	42.4	42.4	42.4	42.4
142.5°	43.7	43.7	43.7	43.7	42.4
145°	43.7	42.4	42.4	42.4	42.4
147.5°	41.1	41.1	41.1	41.1	39.8
150°	37.2	37.2	37.2	37.2	37.2
152.5°	33.4	34.7	33.4	33.4	33.4
155°	30.8	32.1	30.8	30.8	30.8
157.5°	32.1	32.1	30.8	30.8	32.1
160°	32.1	32.1	32.1	32.1	32.1
162.5°	33.4	33.4	32.1	32.1	32.1
165°	33.4	33.4	32.1	32.1	32.1
167.5°	33.4	33.4	32.1	32.1	32.1
170°	33.4	33.4	32.1	32.1	32.1
172.5°	33.4	33.4	33.4	33.4	33.4
175°	32.1	33.4	32.1	33.4	33.4
177.5°	32.1	32.1	32.1	33.4	34.7
180°	33.4	33.4	33.4	33.4	33.4

(END OF REPORT)