

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: P294580

Luminaire Tested: **BMK-30-NCL-UNV-L750-CD-U**

Issue Date: 3/3/2020

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: P294580
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1903-198-7)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-30-NCL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE
WITH NARROW CLEAR LENS
Light Source: (528) 70 CRI 5000K LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

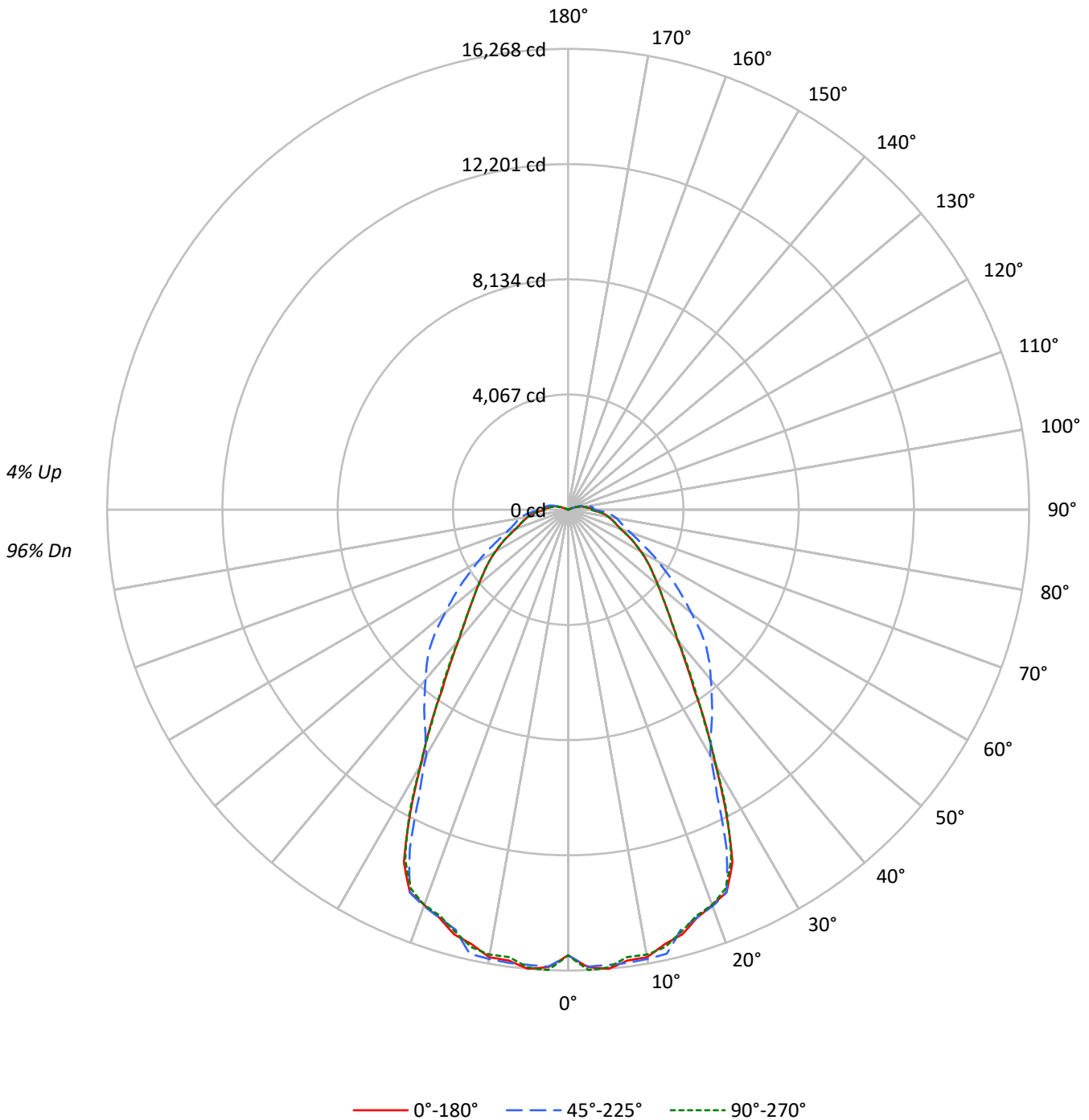
Lumens per Lamp: N/A
Luminaire Lumens: 32678.0 lumens
Efficiency: N/A
Efficacy: 162.5 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

Input Watts (W): 201.1
Input Voltage (V): 120
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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	108	103	99	95	105	100	96	93	95	92	89	91	88	86	86	84	82	80
2	99	91	84	79	96	89	83	78	84	79	75	81	76	73	77	74	71	68
3	91	81	73	67	88	79	72	66	76	70	65	72	67	63	69	65	61	59
4	84	73	65	58	82	71	64	58	68	62	56	65	60	55	63	58	54	52
5	78	66	58	51	76	65	57	51	62	55	50	60	54	49	58	52	48	46
6	73	60	52	46	71	59	51	45	57	50	45	55	49	44	53	48	43	41
7	68	55	47	41	66	54	46	41	52	45	40	51	44	40	49	43	39	37
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	45	40	36	34
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	42	37	33	31
10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	34	30	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	121282	121282	121282
5°	124592	123545	124243
10°	122936	123450	122278
15°	120053	118706	119286
20°	116761	117097	116718
25°	110528	106555	109620
30°	86563	83461	86942
35°	67377	76849	67959
40°	54931	71599	55127
45°	47814	67206	47839
50°	43413	59563	43441
55°	40648	52987	40432
60°	37970	46939	37970
65°	35532	41954	35532
70°	33293	39480	33247
75°	34676	40310	34567
80°	38095	45685	38024
85°	43108	52128	43007



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1531.2	4.7
10°-20°	4352.4	13.3
20°-30°	5974.1	18.3
30°-40°	5238.0	16.0
40°-50°	4483.0	13.7
50°-60°	3630.5	11.1
60°-70°	2723.1	8.3
70°-80°	1983.4	6.1
80°-90°	1357.6	4.2
90°-100°	839.3	2.6
100°-110°	487.2	1.5
110°-120°	77.0	0.2
120°-130°	1.1	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	11857.8	36.3
0°-40°	17095.8	52.3
0°-60°	25209.2	77.1
0°-90°	31273.3	95.7
90°-120°	1403.5	4.3
90°-150°	1404.6	4.3
90°-180°	1405.0	4.3
0°-180°	32678.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	15732	15732	15732	15732	15732	
5°	16268	16118	16132	16164	16223	###
15°	15523	15368	15349	15349	15424	4361
25°	13717	13203	13224	13224	13605	6070
35°	7758	8208	8848	8278	7825	4942
45°	4909	5716	6900	5668	4912	3827
55°	3540	4028	4614	4030	3521	3163
65°	2446	2803	2889	2790	2446	2426
75°	1683	1911	1956	1900	1678	1781
85°	1152	1251	1393	1251	1150	997
90°	847	879	922	863	823	480
95°	721	732	868	745	726	571
105°	448	458	574	450	442	452
115°	48	51	67	51	48	74
125°	0	0	0	0	0	1
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	15732.4	15732.4	15732.4	15732.4	15732.4
2.5°	16161.1	16045.9	16142.4	16206.7	16265.6
5°	16268.3	16118.3	16131.6	16163.8	16222.8
7.5°	16053.9	15893.2	16131.6	16013.7	15930.7
10°	16035.2	15775.3	16102.2	15885.1	15949.4
12.5°	15710.9	15684.1	16053.9	15788.7	15812.8
15°	15523.4	15367.9	15349.2	15349.2	15424.2
17.5°	15108.0	15014.2	15100.0	15054.4	15030.3
20°	14850.8	14807.9	14893.6	14936.5	14845.4
22.5°	14606.9	14397.9	14617.6	14435.4	14489.0
25°	13717.3	13202.8	13224.2	13224.2	13604.7
27.5°	12061.2	11761.1	11383.3	11804.0	12152.3
30°	10394.5	10482.9	10022.0	10464.1	10440.0
32.5°	9049.3	9298.5	9373.5	9309.2	8982.3
35°	7757.7	8207.8	8848.3	8277.5	7824.7
37.5°	6806.4	7425.4	8325.8	7412.0	6884.1
40°	6005.2	6742.1	7827.3	6774.2	6026.6
42.5°	5402.2	6211.5	7385.2	6179.3	5418.3
45°	4909.2	5715.7	6900.2	5667.5	4911.8
47.5°	4485.8	5257.5	6321.4	5260.2	4485.8
50°	4134.7	4761.8	5672.9	4759.1	4137.4
52.5°	3805.1	4389.3	5120.9	4357.2	3815.9
55°	3539.9	4027.6	4614.4	4030.2	3521.1
57.5°	3247.8	3698.0	4099.9	3692.6	3261.2
60°	2971.8	3373.7	3673.8	3344.2	2971.8
62.5°	2701.1	3078.9	3271.9	3081.6	2706.5
65°	2446.5	2802.9	2888.7	2789.5	2446.5
67.5°	2186.6	2535.0	2575.2	2518.9	2200.0
70°	1961.5	2309.9	2326.0	2285.8	1958.8
72.5°	1808.8	2090.1	2108.9	2095.5	1808.8
75°	1682.8	1910.6	1956.2	1899.9	1677.5
77.5°	1551.5	1739.1	1843.6	1741.8	1562.3
80°	1439.0	1578.3	1725.7	1581.0	1436.3
82.5°	1321.1	1425.6	1589.0	1430.9	1331.8
85°	1152.3	1251.4	1393.4	1251.4	1149.6
87.5°	937.9	1061.2	1149.6	1053.1	921.8
90°	846.8	878.9	921.8	862.9	822.7
92.5°	870.9	822.7	895.0	817.3	836.1
95°	720.8	731.6	868.2	744.9	726.2
97.5°	651.2	680.6	825.3	667.2	648.5
100°	573.5	621.7	742.3	611.0	576.1
102.5°	522.5	554.7	680.6	562.7	530.6
105°	447.5	458.2	573.5	450.2	442.1
107.5°	335.0	335.0	377.8	337.6	329.6
110°	222.4	211.7	227.8	206.3	222.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	117.9	112.5	131.3	109.9	115.2
115°	48.2	50.9	67.0	50.9	48.2
117.5°	13.4	21.4	24.1	21.4	13.4
120°	8.0	10.7	8.0	10.7	8.0
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)