

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: P294544

Luminaire Tested: **BMK-30-NFL-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: P294544  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-103-7)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: BMK-30-NFL-UNV-L750-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE  
WITH NARROW FROSTED LENS  
Light Source: (528) 70 CRI 5000K LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

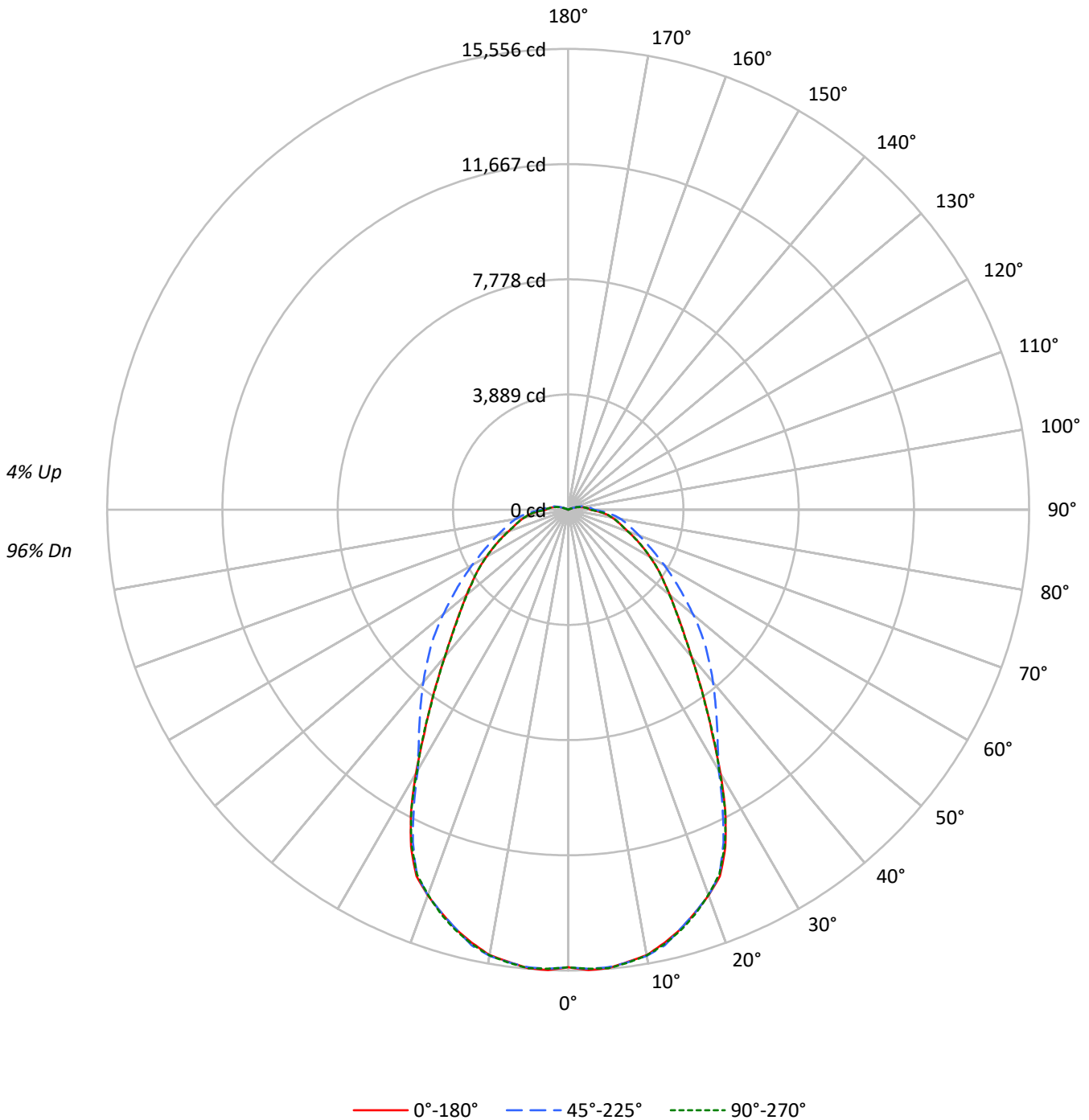
Lumens per Lamp: N/A  
Luminaire Lumens: 32351.0 lumens  
Efficiency: N/A  
Efficacy: 160.9 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.11  
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')  
CIE Type: Direct

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



TEST NUMBER: P294544  
CATALOG NUMBER: BMK-30-NFL-UNV-L750-CD-U

### Luminous Intensity Polar Plot





TEST NUMBER: P294544

CATALOG NUMBER: BMK-30-NFL-UNV-L750-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	96
1	108	103	98	95	105	100	96	93	95	92	89	91	88	86	87	84	82	80
2	99	91	84	78	96	88	82	77	84	79	75	80	76	72	77	73	70	68
3	91	80	73	66	88	79	71	66	75	69	64	72	67	62	69	65	61	59
4	84	72	64	57	81	71	63	57	68	61	56	65	59	55	62	58	53	51
5	77	65	57	50	75	64	56	50	61	55	49	59	53	48	57	52	47	45
6	72	59	51	45	70	58	50	45	56	49	44	54	48	43	52	47	43	41
7	67	54	46	40	65	53	46	40	52	45	40	50	44	39	48	43	38	37
8	63	50	42	37	61	49	42	36	48	41	36	46	40	35	45	39	35	33
9	59	46	39	33	58	46	38	33	44	38	33	43	37	32	42	36	32	30
10	56	43	36	31	54	42	35	30	41	35	30	40	34	30	39	34	30	28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	119058	119058	119058
5°	118963	118755	118963
10°	117035	117251	117096
15°	113344	113215	113663
20°	108943	108854	108715
25°	101124	99885	100714
30°	85576	84537	85020
35°	70427	75958	70220
40°	59092	69570	59157
45°	51856	63937	51463
50°	47084	57774	46762
55°	43687	52230	43667
60°	40696	47834	40797
65°	38402	44589	38185
70°	36455	43180	36306
75°	36926	44039	36945
80°	39604	47605	39628
85°	43348	51593	43871



TEST NUMBER: P294544

CATALOG NUMBER: BMK-30-NFL-UNV-L750-CD-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1470.8	4.5
10°-20°	4120.4	12.7
20°-30°	5632.7	17.4
30°-40°	5290.6	16.4
40°-50°	4561.6	14.1
50°-60°	3742.8	11.6
60°-70°	2883.9	8.9
70°-80°	2113.1	6.5
80°-90°	1354.1	4.2
90°-100°	732.2	2.3
100°-110°	379.2	1.2
110°-120°	68.5	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°	11223.9	34.7
0°-40°	16514.5	51.0
0°-60°	24819.0	76.7
0°-90°	31170.0	96.3
90°-120°	1179.9	3.6
90°-150°	1181.0	3.7
90°-180°	1181.0	3.7
0°-180°	32351.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	15444	15444	15444	15444	15444	
5°	15533	15523	15506	15499	15533	###
15°	14656	14622	14639	14630	14697	4121
25°	12550	12412	12396	12364	12499	5677
35°	8109	8400	8746	8381	8085	5103
45°	5324	5845	6565	5827	5284	4139
55°	3804	4158	4548	4155	3803	3409
65°	2644	2939	3070	2933	2629	2624
75°	1792	2016	2137	2010	1793	1903
85°	1159	1242	1379	1238	1173	1013
90°	752	811	867	820	751	432
95°	637	654	739	654	637	491
105°	344	348	406	350	345	358
115°	39	51	66	52	40	59
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



TEST NUMBER: P294544

CATALOG NUMBER: BMK-30-NFL-UNV-L750-CD-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	15443.8	15443.8	15443.8	15443.8	15443.8
2.5°	15556.3	15527.3	15511.5	15493.9	15508.8
5°	15533.4	15522.9	15506.2	15499.2	15533.4
7.5°	15396.4	15386.7	15408.7	15371.8	15423.6
10°	15265.5	15233.9	15293.6	15169.7	15273.4
12.5°	14978.2	15000.2	15063.4	14975.6	15016.0
15°	14655.9	14622.5	14639.2	14630.4	14697.1
17.5°	14253.5	14232.4	14251.8	14228.9	14299.2
20°	13856.5	13830.1	13845.1	13831.9	13827.5
22.5°	13385.6	13301.3	13335.6	13241.6	13324.1
25°	12550.2	12412.3	12396.5	12364.0	12499.3
27.5°	11486.4	11349.4	11272.1	11305.5	11469.8
30°	10276.0	10268.1	10151.2	10227.6	10209.2
32.5°	9074.3	9305.3	9380.8	9300.9	9127.8
35°	8108.9	8399.6	8745.7	8381.2	8085.1
37.5°	7232.2	7645.0	8150.1	7607.3	7209.3
40°	6460.0	6962.5	7605.5	6928.2	6467.1
42.5°	5836.3	6366.9	7061.8	6358.1	5829.3
45°	5324.2	5845.1	6564.6	5826.7	5283.8
47.5°	4855.1	5379.6	6041.0	5369.9	4854.2
50°	4484.4	4914.0	5502.5	4913.1	4453.7
52.5°	4113.7	4519.6	4996.6	4527.5	4097.9
55°	3804.5	4158.5	4548.5	4155.0	3802.8
57.5°	3494.4	3832.6	4124.3	3828.2	3498.8
60°	3185.2	3513.8	3743.9	3504.1	3193.1
62.5°	2902.4	3223.0	3379.3	3206.3	2909.4
65°	2644.1	2939.3	3070.1	2933.1	2629.2
67.5°	2387.6	2678.4	2796.9	2681.0	2379.7
70°	2147.8	2445.6	2544.0	2442.1	2139.0
72.5°	1951.0	2231.2	2328.7	2223.3	1951.0
75°	1792.0	2016.0	2137.2	2009.9	1792.9
77.5°	1638.3	1821.0	1966.8	1815.7	1650.6
80°	1496.0	1637.4	1798.2	1621.6	1496.9
82.5°	1346.6	1438.9	1598.8	1431.9	1353.7
85°	1158.7	1242.1	1379.1	1237.7	1172.7
87.5°	939.0	1034.8	1112.1	1034.8	951.3
90°	751.9	810.8	867.0	820.5	751.1
92.5°	712.4	731.7	804.6	734.4	714.2
95°	636.9	654.4	738.8	653.6	636.9
97.5°	565.7	582.4	667.6	579.8	562.2
100°	490.2	505.1	586.8	509.5	487.5
102.5°	421.7	433.1	502.5	433.9	420.8
105°	343.5	347.9	405.8	349.6	345.2
107.5°	254.7	260.0	289.9	263.5	259.1
110°	170.4	174.8	195.0	178.3	174.8



TEST NUMBER: P294544

CATALOG NUMBER: BMK-30-NFL-UNV-L750-CD-U

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	96.6	101.9	127.4	102.8	94.9
115°	38.7	50.9	65.9	51.8	39.5
117.5°	10.5	19.3	23.7	19.3	11.4
120°	8.8	9.7	8.8	9.7	7.9
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)