

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: P388712

Luminaire Tested: **24CZ2-170VHE-UNV-L950-CD2-U**

Issue Date: 2/28/2020

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: P388712
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-UNV-L950-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15433.0 lumens
Efficiency: N/A
Efficacy: 125.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

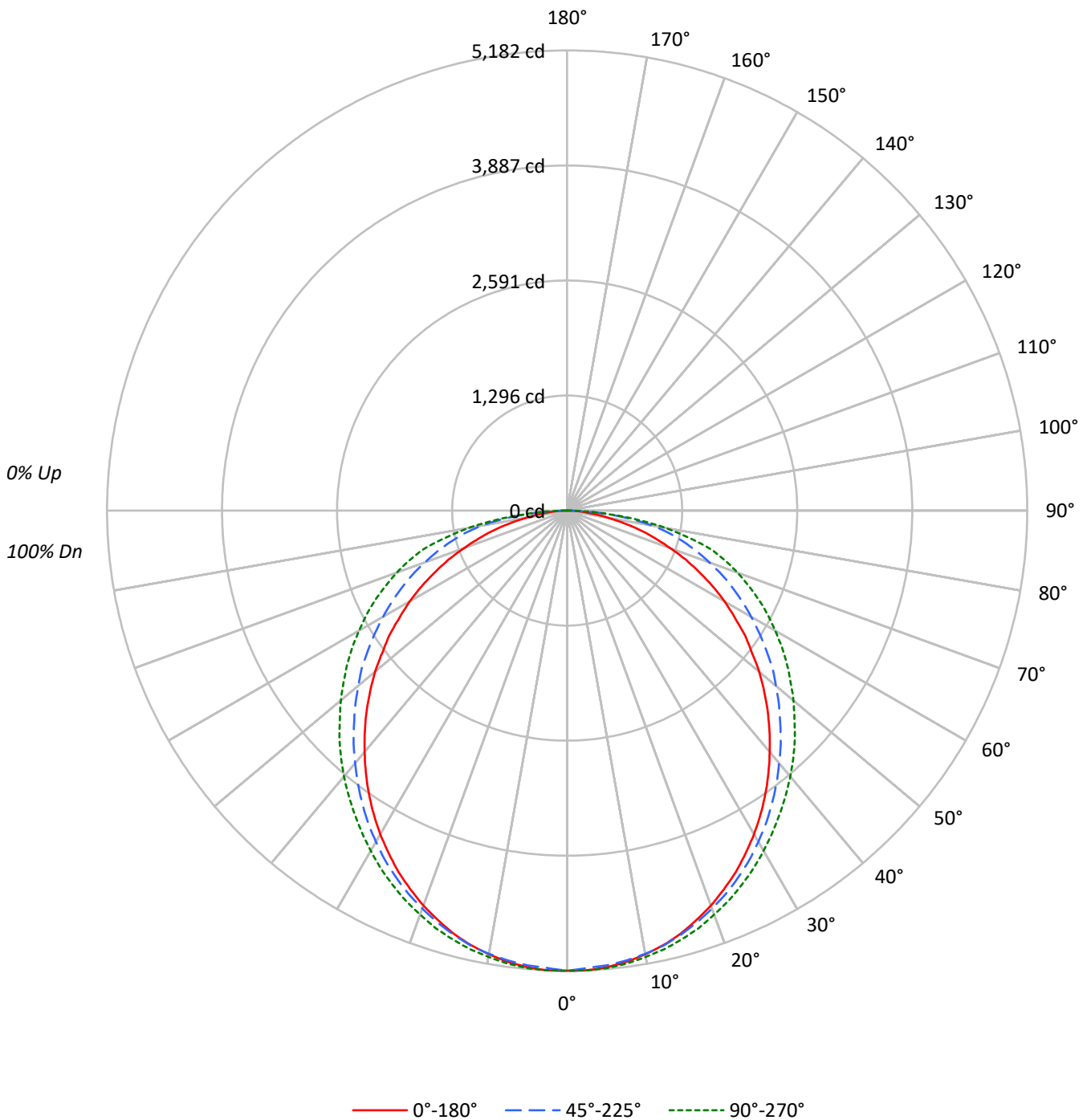
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6972	6972	6972
5°	6971	6943	6985
10°	6932	6925	6974
15°	6873	6888	6959
20°	6778	6829	6932
25°	6668	6767	6905
30°	6538	6690	6874
35°	6396	6607	6853
40°	6233	6523	6867
45°	6076	6459	6900
50°	5908	6426	6965
55°	5727	6416	7092
60°	5503	6445	7277
65°	5215	6543	7592
70°	4843	6707	8024
75°	4418	7042	8702
80°	3632	7583	8700
85°	2783	6998	7475



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	490.1	3.2
10°-20°	1399.1	9.1
20°-30°	2105.4	13.6
30°-40°	2523.0	16.3
40°-50°	2629.3	17.0
50°-60°	2446.2	15.9
60°-70°	2014.8	13.1
70°-80°	1372.2	8.9
80°-90°	453.0	2.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	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°	3994.5	25.9
0°-40°	6517.5	42.2
0°-60°	11593.1	75.1
0°-90°	15433.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15433.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5182	5182	5182	5182	5182	
5°	5161	5161	5140	5166	5171	490
15°	4934	4940	4945	4991	4996	1390
25°	4491	4512	4558	4636	4651	2068
35°	3894	3940	4023	4131	4172	2434
45°	3193	3260	3394	3564	3626	2463
55°	2441	2524	2735	2951	3023	2176
65°	1638	1777	2055	2297	2385	1626
75°	850	1040	1355	1597	1674	896
85°	180	350	453	484	484	223
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5181.6	5181.6	5181.6	5181.6	5181.6
2.5°	5181.6	5181.6	5155.8	5181.6	5181.6
5°	5161.0	5161.0	5140.4	5166.1	5171.3
7.5°	5124.9	5130.1	5109.5	5140.4	5145.5
10°	5073.4	5078.6	5068.3	5099.2	5104.3
12.5°	5011.6	5016.8	5016.8	5052.8	5058.0
15°	4934.3	4939.5	4944.6	4991.0	4996.2
17.5°	4836.5	4851.9	4862.2	4918.9	4929.2
20°	4733.5	4748.9	4769.5	4831.3	4841.6
22.5°	4615.0	4635.6	4671.7	4738.6	4754.1
25°	4491.4	4512.0	4558.3	4635.6	4651.1
27.5°	4352.3	4383.2	4439.9	4522.3	4542.9
30°	4208.1	4239.0	4306.0	4393.5	4424.4
32.5°	4053.6	4094.8	4172.0	4269.9	4300.8
35°	3893.9	3940.3	4022.7	4130.8	4172.0
37.5°	3723.9	3775.4	3873.3	3991.8	4043.3
40°	3548.8	3610.6	3713.6	3852.7	3909.4
42.5°	3373.7	3430.3	3559.1	3708.5	3770.3
45°	3193.4	3260.4	3394.3	3564.3	3626.1
47.5°	3008.0	3075.0	3234.6	3414.9	3471.6
50°	2822.6	2889.5	3069.8	3260.4	3327.3
52.5°	2621.7	2709.3	2915.3	3105.9	3172.8
55°	2441.4	2523.8	2735.0	2951.3	3023.4
57.5°	2235.4	2333.3	2565.0	2791.7	2868.9
60°	2044.8	2147.8	2395.1	2626.8	2704.1
62.5°	1849.1	1962.4	2225.1	2462.0	2549.6
65°	1637.9	1777.0	2055.1	2297.2	2384.8
67.5°	1447.3	1591.6	1885.1	2132.4	2209.6
70°	1231.0	1406.1	1704.9	1952.1	2039.7
72.5°	1045.6	1220.7	1534.9	1777.0	1864.5
75°	849.9	1040.4	1354.6	1596.7	1674.0
77.5°	654.1	865.3	1179.5	1364.9	1390.7
80°	468.7	690.2	978.6	1086.8	1122.8
82.5°	329.6	530.5	721.1	793.2	813.8
85°	180.3	350.2	453.3	484.2	484.2
87.5°	77.3	149.4	180.3	185.4	190.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)