

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: P391135

Luminaire Tested: **24CZ2-170VHE-HRP-UNV-L950-CD2-SWPD1-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: P391135
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-HRP-UNV-L950-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12937.5 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

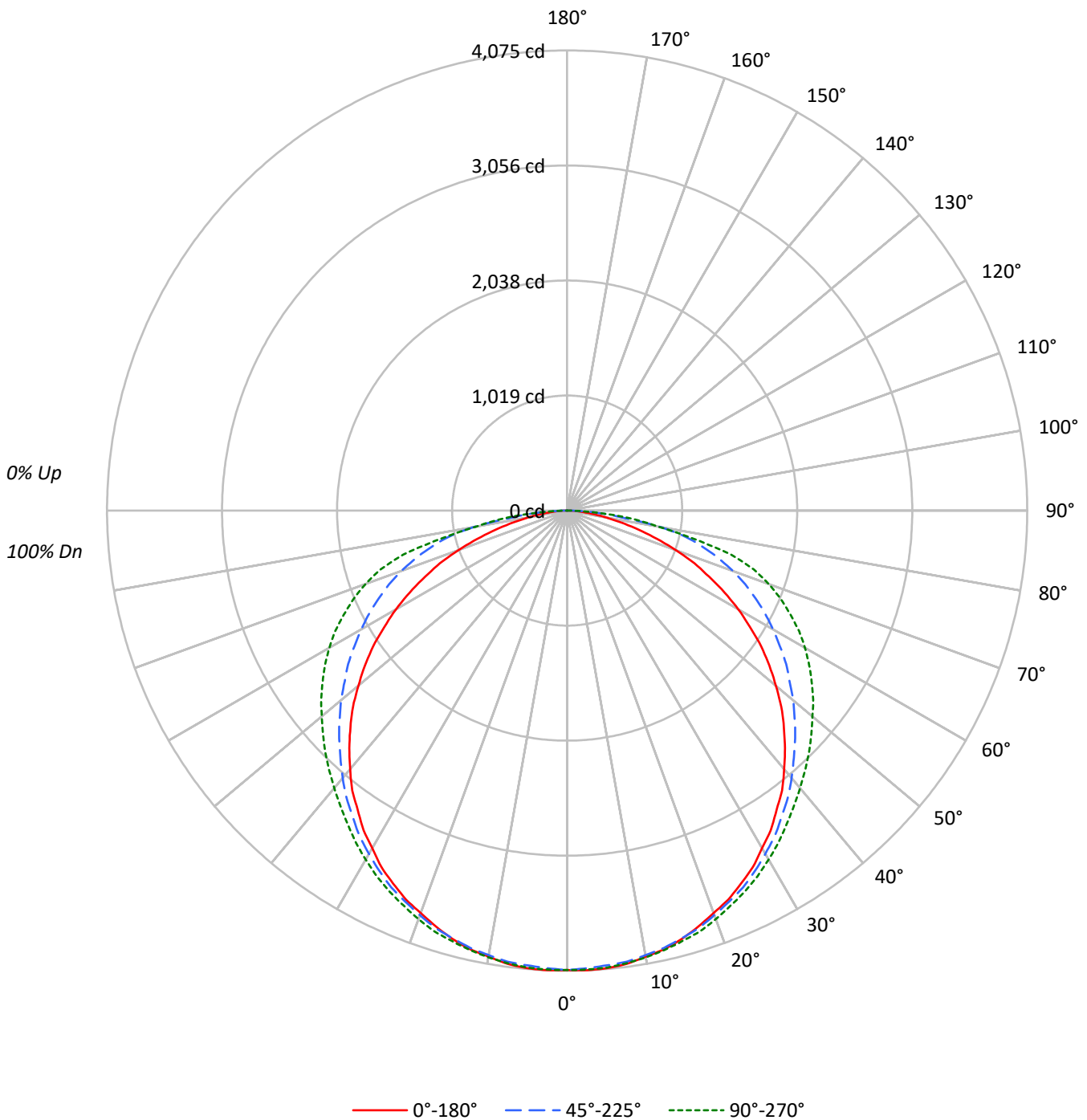
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5474	5474	5474
5°	5495	5460	5486
10°	5480	5462	5488
15°	5471	5462	5497
20°	5430	5458	5513
25°	5411	5468	5525
30°	5364	5454	5543
35°	5312	5439	5565
40°	5252	5433	5636
45°	5165	5434	5763
50°	5050	5467	5937
55°	4922	5555	6202
60°	4714	5664	6545
65°	4413	5863	6946
70°	4014	6135	7473
75°	3402	6472	7806
80°	2685	6513	6315
85°	1981	4954	5548



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	385.9	3.0
10°-20°	1110.7	8.6
20°-30°	1698.5	13.1
30°-40°	2076.4	16.0
40°-50°	2213.0	17.1
50°-60°	2115.9	16.4
60°-70°	1792.5	13.9
70°-80°	1204.7	9.3
80°-90°	339.8	2.6
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°	3195.2	24.7
0°-40°	5271.6	40.7
0°-60°	9600.5	74.2
0°-90°	12937.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12937.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4068	4068	4068	4068	4068	
5°	4068	4062	4043	4062	4062	387
15°	3927	3927	3921	3953	3946	1107
25°	3645	3658	3683	3716	3722	1680
35°	3234	3260	3311	3375	3388	2026
45°	2714	2759	2856	2978	3029	2094
55°	2098	2175	2368	2554	2644	1869
65°	1386	1527	1842	2086	2182	1376
75°	654	892	1245	1457	1502	701
85°	128	263	321	346	359	159
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4068.5	4068.5	4068.5	4068.5	4068.5
2.5°	4074.9	4074.9	4055.6	4068.5	4068.5
5°	4068.5	4062.1	4042.8	4062.1	4062.1
7.5°	4049.2	4042.8	4030.0	4049.2	4042.8
10°	4010.7	4010.7	3997.9	4017.1	4017.1
12.5°	3978.6	3972.2	3965.8	3991.5	3985.1
15°	3927.3	3927.3	3920.9	3953.0	3946.5
17.5°	3863.1	3869.5	3876.0	3901.6	3908.0
20°	3792.5	3805.4	3811.8	3850.3	3850.3
22.5°	3728.4	3734.8	3747.6	3786.1	3786.1
25°	3644.9	3657.8	3683.4	3715.5	3721.9
27.5°	3561.5	3567.9	3600.0	3644.9	3651.4
30°	3452.4	3471.7	3510.2	3561.5	3567.9
32.5°	3356.2	3375.4	3420.3	3471.7	3484.5
35°	3234.2	3259.9	3311.3	3375.4	3388.3
37.5°	3125.2	3144.4	3208.6	3279.2	3298.4
40°	2990.4	3028.9	3093.1	3176.5	3208.6
42.5°	2855.6	2894.1	2971.1	3080.2	3118.7
45°	2714.5	2759.4	2855.6	2977.6	3028.9
47.5°	2573.3	2624.6	2733.7	2874.9	2932.6
50°	2412.8	2477.0	2611.8	2772.2	2836.4
52.5°	2258.8	2335.8	2483.4	2663.1	2746.5
55°	2098.4	2175.4	2367.9	2554.0	2643.9
57.5°	1918.7	2021.4	2233.2	2444.9	2541.2
60°	1751.9	1848.1	2104.8	2335.8	2432.1
62.5°	1572.2	1700.5	1976.5	2220.3	2316.6
65°	1386.1	1527.3	1841.7	2085.6	2181.8
67.5°	1219.3	1373.3	1707.0	1950.8	2047.1
70°	1020.3	1212.8	1559.4	1803.2	1899.5
72.5°	834.2	1046.0	1405.4	1642.8	1732.6
75°	654.5	892.0	1244.9	1456.7	1501.6
77.5°	487.7	738.0	1078.1	1167.9	1135.8
80°	346.5	590.4	840.6	795.7	815.0
82.5°	224.6	449.2	519.8	590.4	609.6
85°	128.3	263.1	320.9	346.5	359.4
87.5°	57.8	96.3	128.3	128.3	121.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)