

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: P391136

Luminaire Tested: **24CZ2-170VHE-HRP-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: P391136
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-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: 13100.0 lumens
Efficiency: N/A
Efficacy: 106.2 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

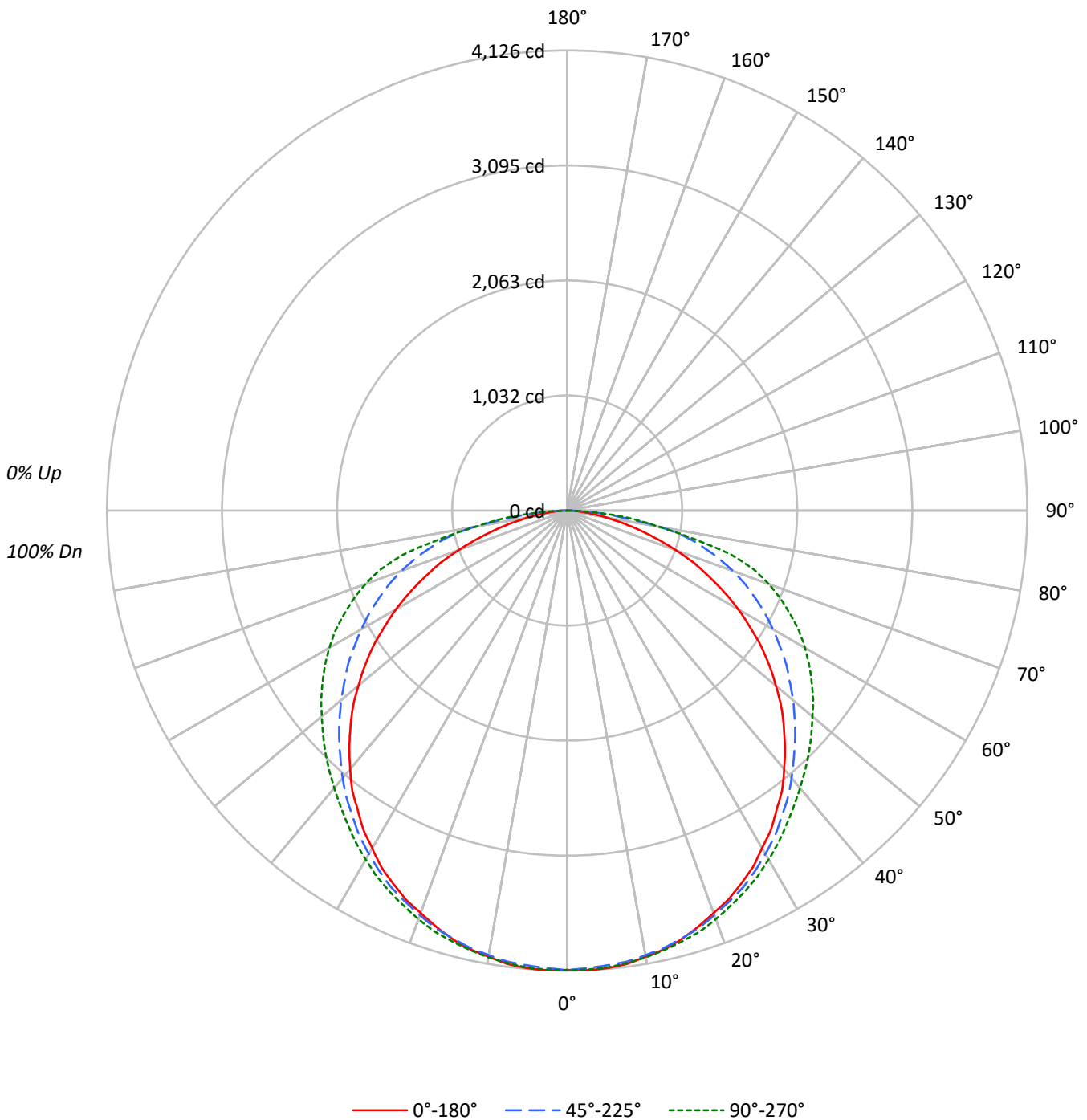
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5543	5543	5543
5°	5564	5529	5555
10°	5548	5531	5557
15°	5539	5530	5566
20°	5499	5526	5582
25°	5479	5537	5595
30°	5431	5522	5613
35°	5379	5507	5635
40°	5318	5501	5706
45°	5230	5502	5836
50°	5114	5536	6012
55°	4984	5624	6280
60°	4774	5735	6627
65°	4468	5937	7033
70°	4064	6212	7566
75°	3446	6553	7904
80°	2719	6595	6394
85°	2007	5016	5618



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	390.8	3.0
10°-20°	1124.7	8.6
20°-30°	1719.9	13.1
30°-40°	2102.5	16.0
40°-50°	2240.8	17.1
50°-60°	2142.5	16.4
60°-70°	1815.0	13.9
70°-80°	1219.8	9.3
80°-90°	344.1	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°	3235.3	24.7
0°-40°	5337.8	40.7
0°-60°	9721.1	74.2
0°-90°	13100.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13100.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4120	4120	4120	4120	4120	
5°	4120	4113	4094	4113	4113	391
15°	3977	3977	3970	4003	3996	1121
25°	3691	3704	3730	3762	3769	1701
35°	3275	3301	3353	3418	3431	2052
45°	2748	2794	2892	3015	3067	2120
55°	2125	2203	2398	2586	2677	1892
65°	1404	1546	1865	2112	2209	1393
75°	663	903	1261	1475	1520	710
85°	130	266	325	351	364	161
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4119.6	4119.6	4119.6	4119.6	4119.6
2.5°	4126.1	4126.1	4106.6	4119.6	4119.6
5°	4119.6	4113.1	4093.6	4113.1	4113.1
7.5°	4100.1	4093.6	4080.6	4100.1	4093.6
10°	4061.1	4061.1	4048.1	4067.6	4067.6
12.5°	4028.6	4022.1	4015.6	4041.6	4035.1
15°	3976.6	3976.6	3970.1	4002.6	3996.1
17.5°	3911.6	3918.1	3924.6	3950.6	3957.1
20°	3840.2	3853.2	3859.7	3898.7	3898.7
22.5°	3775.2	3781.7	3794.7	3833.7	3833.7
25°	3690.7	3703.7	3729.7	3762.2	3768.7
27.5°	3606.3	3612.8	3645.2	3690.7	3697.2
30°	3495.8	3515.3	3554.3	3606.3	3612.8
32.5°	3398.3	3417.8	3463.3	3515.3	3528.3
35°	3274.9	3300.9	3352.8	3417.8	3430.8
37.5°	3164.4	3183.9	3248.9	3320.4	3339.8
40°	3028.0	3066.9	3131.9	3216.4	3248.9
42.5°	2891.5	2930.5	3008.5	3118.9	3157.9
45°	2748.5	2794.0	2891.5	3015.0	3066.9
47.5°	2605.6	2657.6	2768.0	2911.0	2969.5
50°	2443.2	2508.1	2644.6	2807.0	2872.0
52.5°	2287.2	2365.2	2514.6	2696.6	2781.0
55°	2124.8	2202.7	2397.7	2586.1	2677.1
57.5°	1942.8	2046.8	2261.2	2475.6	2573.1
60°	1773.9	1871.4	2131.3	2365.2	2462.6
62.5°	1591.9	1721.9	2001.3	2248.2	2345.7
65°	1403.5	1546.5	1864.9	2111.8	2209.2
67.5°	1234.6	1390.5	1728.4	1975.3	2072.8
70°	1033.1	1228.1	1579.0	1825.9	1923.3
72.5°	844.7	1059.1	1423.0	1663.4	1754.4
75°	662.8	903.2	1260.6	1475.0	1520.5
77.5°	493.8	747.2	1091.6	1182.6	1150.1
80°	350.9	597.8	851.2	805.7	825.2
82.5°	227.4	454.8	526.3	597.8	617.3
85°	130.0	266.4	324.9	350.9	363.9
87.5°	58.5	97.5	130.0	130.0	123.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)