

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: P390943

Luminaire Tested: **24CZ2-110VHE-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: P390943
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: 24CZ2-110VHE-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: 8435.5 lumens
Efficiency: N/A
Efficacy: 109.0 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

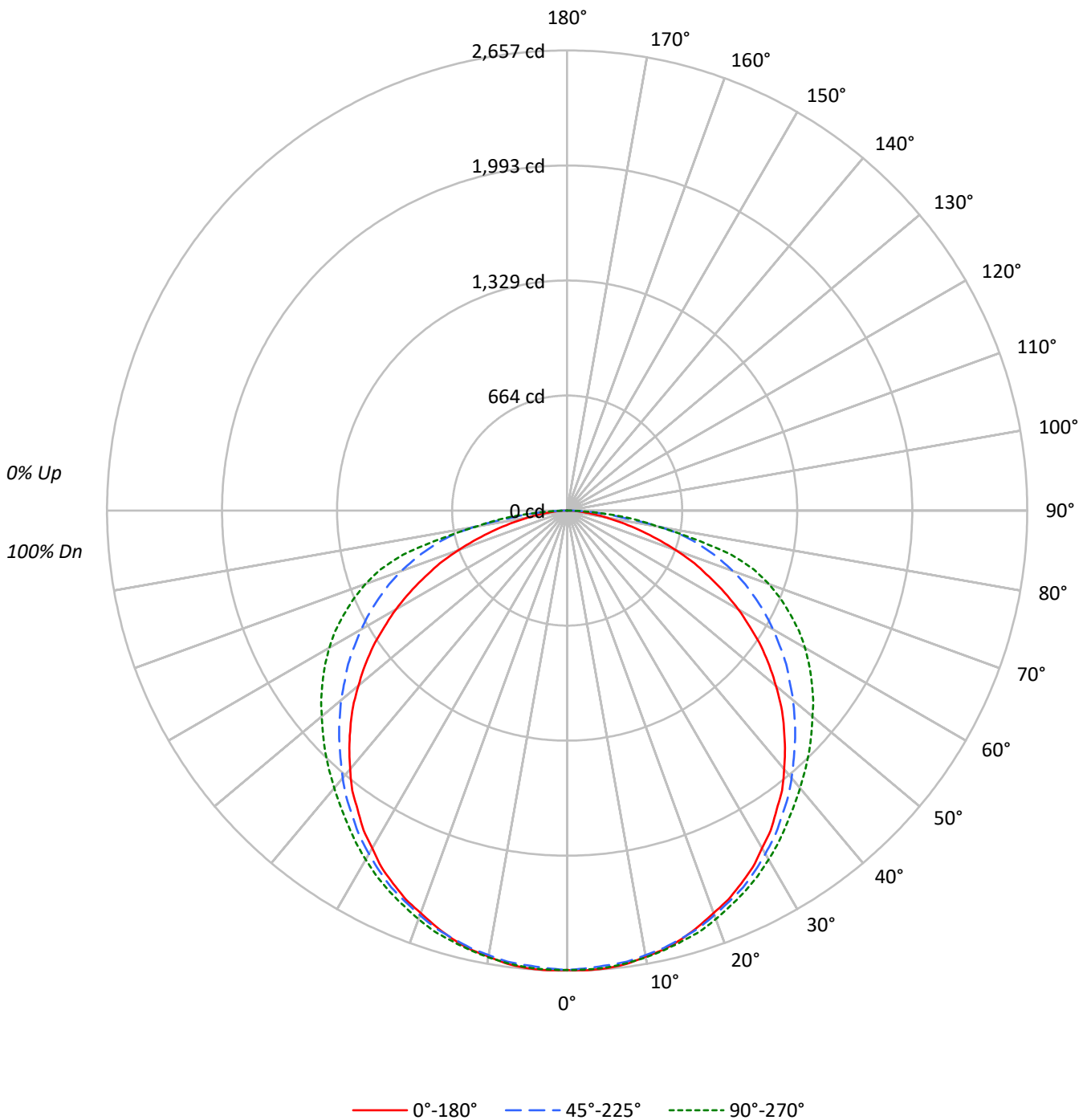
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3569	3569	3569
5°	3583	3560	3577
10°	3573	3561	3579
15°	3567	3561	3584
20°	3541	3559	3595
25°	3528	3566	3603
30°	3497	3556	3614
35°	3464	3546	3629
40°	3425	3542	3675
45°	3368	3543	3758
50°	3293	3565	3871
55°	3210	3622	4044
60°	3074	3693	4267
65°	2877	3823	4529
70°	2617	4000	4872
75°	2219	4220	5090
80°	1750	4247	4117
85°	1292	3230	3617



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	251.6	3.0
10°-20°	724.2	8.6
20°-30°	1107.5	13.1
30°-40°	1353.9	16.0
40°-50°	1442.9	17.1
50°-60°	1379.6	16.4
60°-70°	1168.7	13.9
70°-80°	785.5	9.3
80°-90°	221.6	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°	2083.3	24.7
0°-40°	3437.2	40.7
0°-60°	6259.7	74.2
0°-90°	8435.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8435.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2653	2653	2653	2653	2653	
5°	2653	2648	2636	2648	2648	252
15°	2561	2561	2556	2577	2573	722
25°	2377	2385	2402	2423	2427	1095
35°	2109	2126	2159	2201	2209	1321
45°	1770	1799	1862	1941	1975	1365
55°	1368	1418	1544	1665	1724	1219
65°	904	996	1201	1360	1423	897
75°	427	582	812	950	979	457
85°	84	172	209	226	234	104
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2652.7	2652.7	2652.7	2652.7	2652.7
2.5°	2656.9	2656.9	2644.4	2652.7	2652.7
5°	2652.7	2648.5	2636.0	2648.5	2648.5
7.5°	2640.2	2636.0	2627.6	2640.2	2636.0
10°	2615.1	2615.1	2606.7	2619.3	2619.3
12.5°	2594.1	2590.0	2585.8	2602.5	2598.3
15°	2560.7	2560.7	2556.5	2577.4	2573.2
17.5°	2518.8	2523.0	2527.2	2543.9	2548.1
20°	2472.8	2481.2	2485.4	2510.5	2510.5
22.5°	2431.0	2435.2	2443.5	2468.6	2468.6
25°	2376.6	2384.9	2401.7	2422.6	2426.8
27.5°	2322.2	2326.4	2347.3	2376.6	2380.8
30°	2251.0	2263.6	2288.7	2322.2	2326.4
32.5°	2188.3	2200.8	2230.1	2263.6	2272.0
35°	2108.8	2125.5	2159.0	2200.8	2209.2
37.5°	2037.7	2050.2	2092.1	2138.1	2150.6
40°	1949.8	1974.9	2016.7	2071.1	2092.1
42.5°	1861.9	1887.0	1937.2	2008.4	2033.5
45°	1769.9	1799.2	1861.9	1941.4	1974.9
47.5°	1677.8	1711.3	1782.4	1874.5	1912.1
50°	1573.2	1615.1	1702.9	1807.5	1849.4
52.5°	1472.8	1523.0	1619.2	1736.4	1790.8
55°	1368.2	1418.4	1543.9	1665.3	1723.9
57.5°	1251.0	1318.0	1456.1	1594.1	1656.9
60°	1142.3	1205.0	1372.4	1523.0	1585.8
62.5°	1025.1	1108.8	1288.7	1447.7	1510.5
65°	903.8	995.8	1200.8	1359.8	1422.6
67.5°	795.0	895.4	1113.0	1272.0	1334.7
70°	665.3	790.8	1016.7	1175.7	1238.5
72.5°	543.9	682.0	916.3	1071.1	1129.7
75°	426.8	581.6	811.7	949.8	979.1
77.5°	318.0	481.2	702.9	761.5	740.6
80°	225.9	384.9	548.1	518.8	531.4
82.5°	146.4	292.9	338.9	384.9	397.5
85°	83.7	171.5	209.2	225.9	234.3
87.5°	37.7	62.8	83.7	83.7	79.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)