

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: P390990

Luminaire Tested: **24CZ2-120VHE-HRP-UNV-L950-CD2-SDWPD1-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: P390990  
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: 24CZ2-120VHE-HRP-UNV-L950-CD2-SDWPD1-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: 9169.5 lumens  
Efficiency: N/A  
Efficacy: 109.7 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

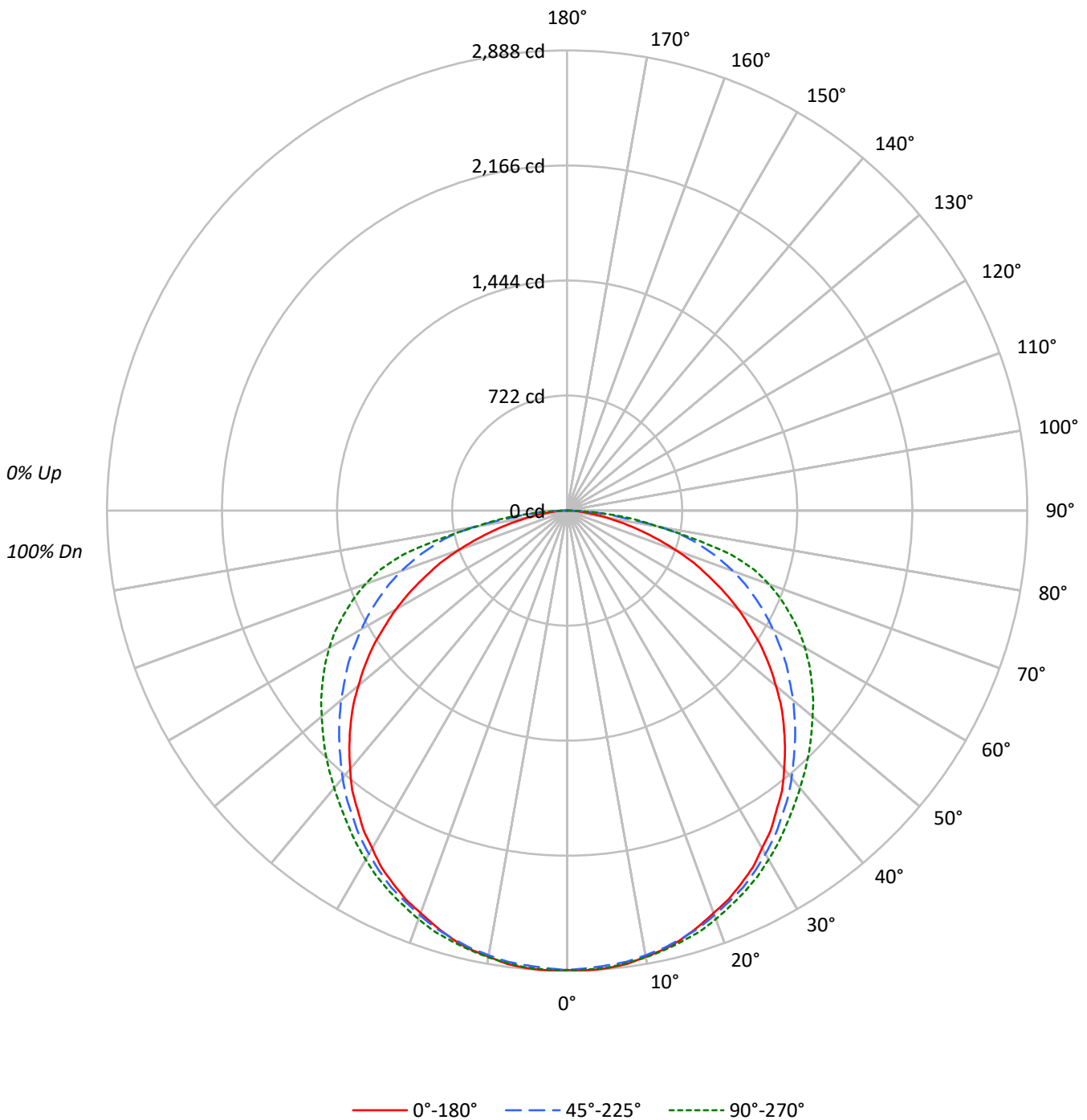
Input Watts (W): 83.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3880	3880	3880
5°	3895	3870	3888
10°	3884	3871	3890
15°	3877	3871	3896
20°	3849	3868	3907
25°	3835	3876	3916
30°	3802	3865	3929
35°	3765	3855	3944
40°	3723	3850	3994
45°	3661	3851	4085
50°	3580	3875	4208
55°	3489	3937	4396
60°	3341	4014	4639
65°	3128	4156	4923
70°	2845	4348	5296
75°	2412	4587	5533
80°	1903	4616	4475
85°	1405	3511	3932



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	273.5	3.0
10°-20°	787.2	8.6
20°-30°	1203.8	13.1
30°-40°	1471.7	16.0
40°-50°	1568.5	17.1
50°-60°	1499.7	16.4
60°-70°	1270.4	13.9
70°-80°	853.8	9.3
80°-90°	240.8	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°	2264.6	24.7
0°-40°	3736.2	40.7
0°-60°	6804.4	74.2
0°-90°	9169.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9169.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2884	2884	2884	2884	2884	
5°	2884	2879	2865	2879	2879	274
15°	2784	2784	2779	2802	2797	785
25°	2583	2592	2611	2633	2638	1191
35°	2292	2310	2347	2392	2401	1436
45°	1924	1956	2024	2110	2147	1484
55°	1487	1542	1678	1810	1874	1325
65°	982	1082	1305	1478	1546	975
75°	464	632	882	1032	1064	497
85°	91	186	227	246	255	113
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2883.5	2883.5	2883.5	2883.5	2883.5
2.5°	2888.1	2888.1	2874.4	2883.5	2883.5
5°	2883.5	2879.0	2865.4	2879.0	2879.0
7.5°	2869.9	2865.4	2856.3	2869.9	2865.4
10°	2842.6	2842.6	2833.5	2847.2	2847.2
12.5°	2819.9	2815.3	2810.8	2829.0	2824.4
15°	2783.5	2783.5	2778.9	2801.7	2797.1
17.5°	2738.0	2742.6	2747.1	2765.3	2769.8
20°	2688.0	2697.1	2701.6	2728.9	2728.9
22.5°	2642.5	2647.0	2656.1	2683.4	2683.4
25°	2583.4	2592.5	2610.7	2633.4	2637.9
27.5°	2524.2	2528.8	2551.5	2583.4	2587.9
30°	2446.9	2460.6	2487.9	2524.2	2528.8
32.5°	2378.7	2392.3	2424.2	2460.6	2469.7
35°	2292.3	2310.5	2346.9	2392.3	2401.4
37.5°	2215.0	2228.6	2274.1	2324.1	2337.8
40°	2119.5	2146.7	2192.2	2251.3	2274.1
42.5°	2023.9	2051.2	2105.8	2183.1	2210.4
45°	1923.9	1955.7	2023.9	2110.4	2146.7
47.5°	1823.8	1860.2	1937.5	2037.6	2078.5
50°	1710.1	1755.6	1851.1	1964.8	2010.3
52.5°	1601.0	1655.5	1760.1	1887.5	1946.6
55°	1487.3	1541.8	1678.3	1810.2	1873.9
57.5°	1359.9	1432.7	1582.8	1732.9	1801.1
60°	1241.7	1309.9	1491.8	1655.5	1723.8
62.5°	1114.3	1205.3	1400.8	1573.7	1641.9
65°	982.4	1082.5	1305.3	1478.2	1546.4
67.5°	864.2	973.3	1209.8	1382.6	1450.9
70°	723.2	859.6	1105.2	1278.0	1346.3
72.5°	591.3	741.4	996.1	1164.3	1228.0
75°	463.9	632.2	882.3	1032.4	1064.3
77.5°	345.7	523.0	764.1	827.8	805.0
80°	245.6	418.4	595.8	564.0	577.6
82.5°	159.2	318.4	368.4	418.4	432.1
85°	91.0	186.5	227.4	245.6	254.7
87.5°	40.9	68.2	91.0	91.0	86.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)