

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: P388639

Luminaire Tested: **24CZ2-120VHE-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: P388639  
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: 24CZ2-120VHE-UNV-L950-CD2-SWPD1-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: 10934.4 lumens  
Efficiency: N/A  
Efficacy: 130.8 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

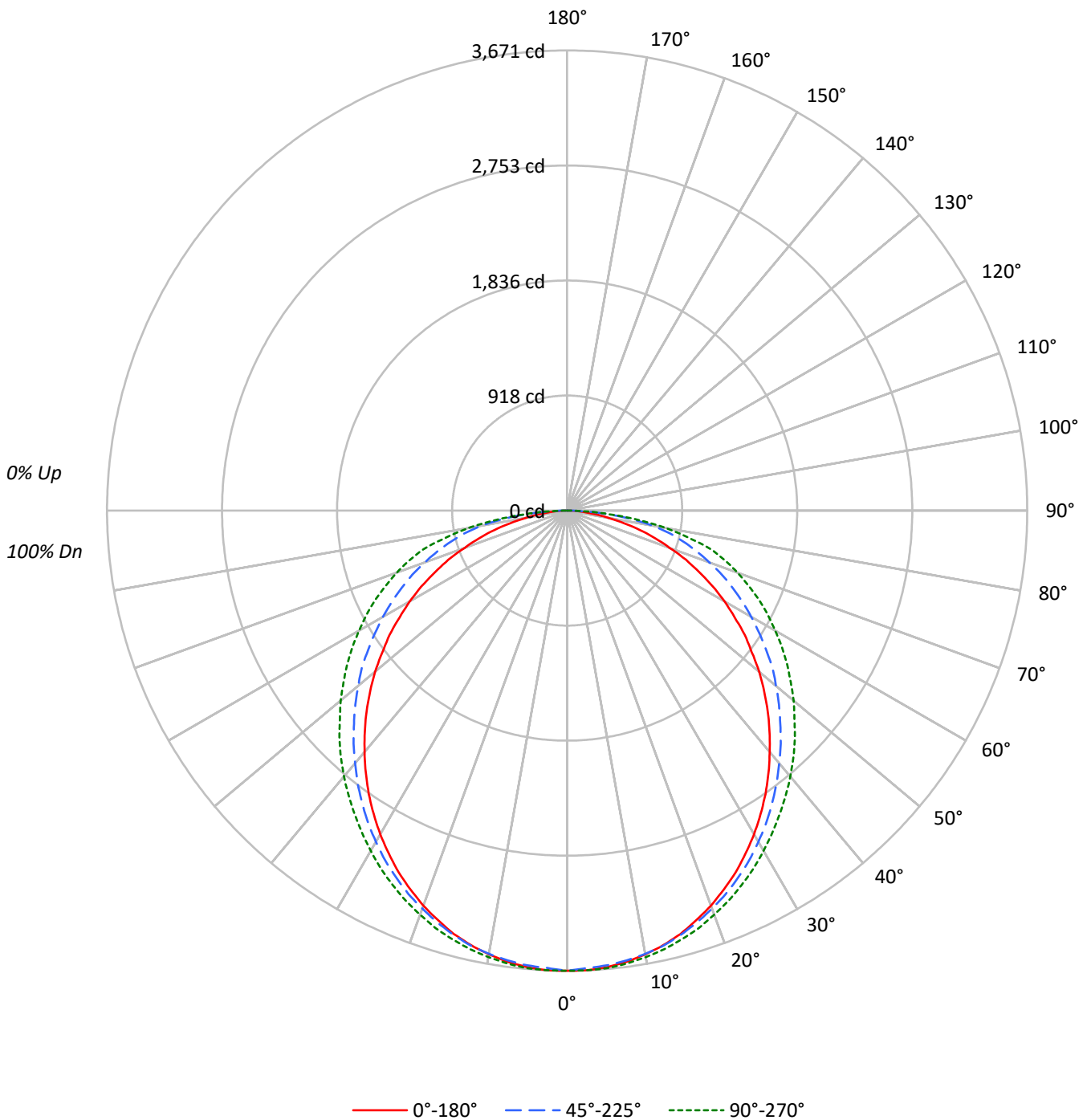
Input Watts (W): 83.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	4940	4940	4940
5°	4939	4919	4949
10°	4911	4906	4941
15°	4870	4880	4931
20°	4802	4838	4912
25°	4724	4795	4892
30°	4632	4740	4870
35°	4532	4681	4855
40°	4416	4621	4865
45°	4305	4576	4889
50°	4186	4553	4935
55°	4058	4546	5025
60°	3899	4566	5156
65°	3695	4636	5379
70°	3431	4752	5685
75°	3130	4990	6166
80°	2573	5373	6164
85°	1971	4957	5295



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	347.2	3.2
10°-20°	991.2	9.1
20°-30°	1491.7	13.6
30°-40°	1787.6	16.3
40°-50°	1862.9	17.0
50°-60°	1733.2	15.9
60°-70°	1427.5	13.1
70°-80°	972.2	8.9
80°-90°	321.0	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°	2830.1	25.9
0°-40°	4617.7	42.2
0°-60°	8213.8	75.1
0°-90°	10934.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10934.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3671	3671	3671	3671	3671	
5°	3657	3657	3642	3660	3664	347
15°	3496	3500	3503	3536	3540	985
25°	3182	3197	3230	3284	3295	1465
35°	2759	2792	2850	2927	2956	1725
45°	2263	2310	2405	2525	2569	1745
55°	1730	1788	1938	2091	2142	1542
65°	1160	1259	1456	1628	1690	1152
75°	602	737	960	1131	1186	635
85°	128	248	321	343	343	158
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3671.2	3671.2	3671.2	3671.2	3671.2
2.5°	3671.2	3671.2	3652.9	3671.2	3671.2
5°	3656.6	3656.6	3642.0	3660.2	3663.9
7.5°	3631.0	3634.7	3620.1	3642.0	3645.6
10°	3594.6	3598.2	3590.9	3612.8	3616.4
12.5°	3550.8	3554.4	3554.4	3580.0	3583.6
15°	3496.0	3499.7	3503.3	3536.2	3539.8
17.5°	3426.7	3437.6	3444.9	3485.1	3492.4
20°	3353.7	3364.6	3379.2	3423.0	3430.3
22.5°	3269.8	3284.4	3309.9	3357.3	3368.3
25°	3182.2	3196.8	3229.6	3284.4	3295.3
27.5°	3083.7	3105.5	3145.7	3204.1	3218.7
30°	2981.5	3003.4	3050.8	3112.8	3134.7
32.5°	2872.0	2901.2	2955.9	3025.3	3047.2
35°	2758.9	2791.7	2850.1	2926.7	2955.9
37.5°	2638.4	2674.9	2744.3	2828.2	2864.7
40°	2514.4	2558.2	2631.1	2729.7	2769.8
42.5°	2390.3	2430.4	2521.7	2627.5	2671.3
45°	2262.6	2310.0	2404.9	2525.3	2569.1
47.5°	2131.2	2178.6	2291.8	2419.5	2459.6
50°	1999.8	2047.3	2175.0	2310.0	2357.4
52.5°	1857.5	1919.5	2065.5	2200.5	2248.0
55°	1729.8	1788.2	1937.8	2091.0	2142.1
57.5°	1583.8	1653.1	1817.3	1977.9	2032.7
60°	1448.8	1521.8	1696.9	1861.1	1915.9
62.5°	1310.1	1390.4	1576.5	1744.4	1806.4
65°	1160.5	1259.0	1456.1	1627.6	1689.6
67.5°	1025.5	1127.6	1335.6	1510.8	1565.5
70°	872.2	996.3	1207.9	1383.1	1445.1
72.5°	740.8	864.9	1087.5	1259.0	1321.0
75°	602.1	737.2	959.8	1131.3	1186.0
77.5°	463.5	613.1	835.7	967.1	985.3
80°	332.1	489.0	693.4	770.0	795.5
82.5°	233.6	375.9	510.9	562.0	576.6
85°	127.7	248.2	321.1	343.0	343.0
87.5°	54.7	105.8	127.7	131.4	135.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)