

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: P388658

Luminaire Tested: **24CZ2-130VHE-UNV-L935-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: P388658  
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: 24CZ2-130VHE-UNV-L935-CD2-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11220.4 lumens  
Efficiency: N/A  
Efficacy: 123.7 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

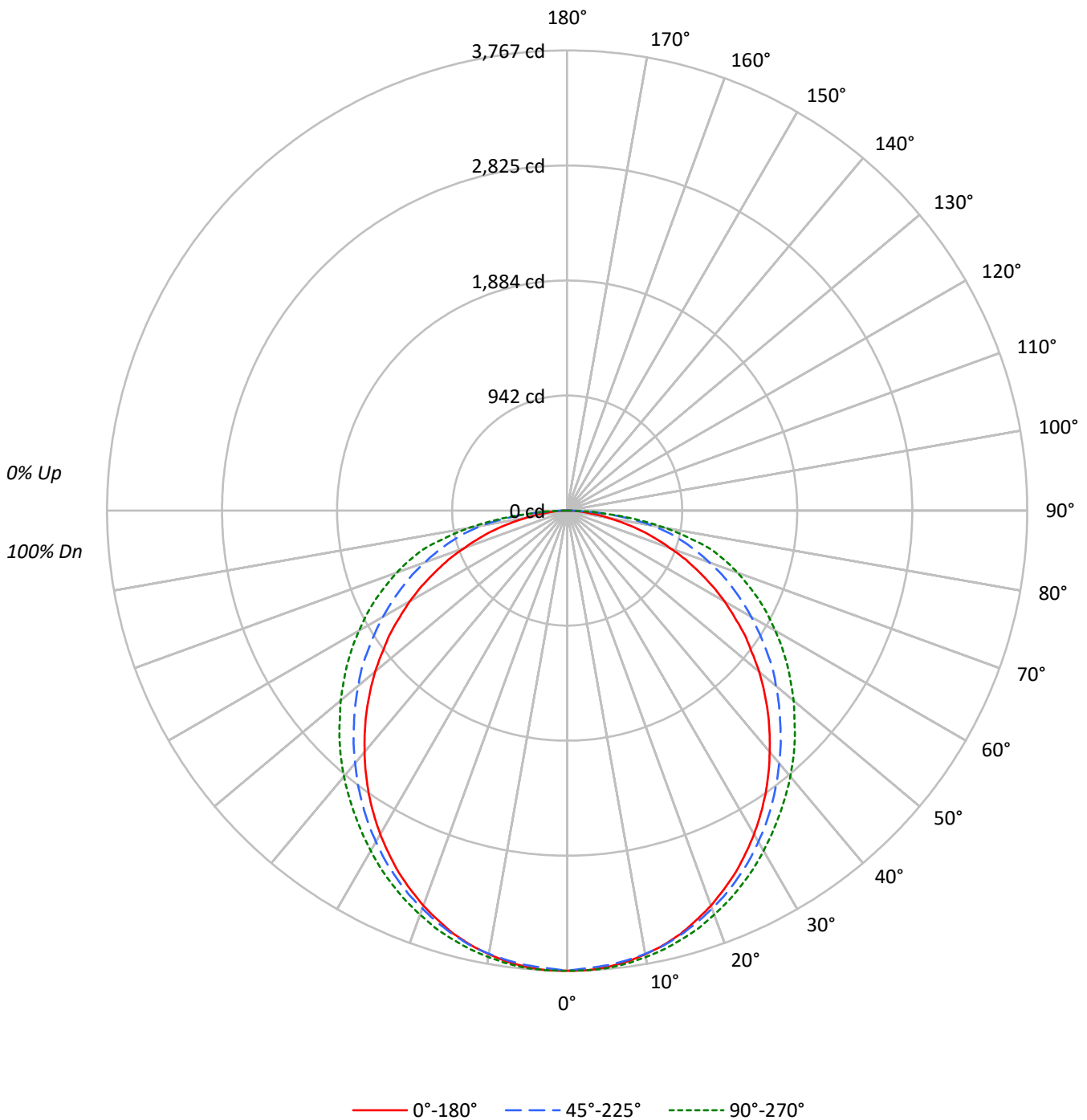
Input Watts (W): 90.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5069	5069	5069
5°	5068	5048	5078
10°	5040	5034	5070
15°	4997	5008	5060
20°	4928	4965	5040
25°	4848	4920	5020
30°	4753	4864	4998
35°	4650	4804	4982
40°	4532	4742	4992
45°	4418	4696	5016
50°	4295	4672	5064
55°	4164	4665	5157
60°	4001	4686	5290
65°	3791	4757	5520
70°	3521	4876	5834
75°	3212	5120	6327
80°	2641	5513	6326
85°	2024	5087	5434



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	356.3	3.2
10°-20°	1017.2	9.1
20°-30°	1530.7	13.6
30°-40°	1834.4	16.3
40°-50°	1911.6	17.0
50°-60°	1778.5	15.9
60°-70°	1464.8	13.1
70°-80°	997.6	8.9
80°-90°	329.4	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°	2904.1	25.9
0°-40°	4738.5	42.2
0°-60°	8428.6	75.1
0°-90°	11220.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11220.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3767	3767	3767	3767	3767	
5°	3752	3752	3737	3756	3760	356
15°	3588	3591	3595	3629	3632	1011
25°	3265	3280	3314	3370	3382	1503
35°	2831	2865	2925	3003	3033	1770
45°	2322	2370	2468	2591	2636	1791
55°	1775	1835	1988	2146	2198	1582
65°	1191	1292	1494	1670	1734	1182
75°	618	756	985	1161	1217	652
85°	131	255	330	352	352	162
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3767.2	3767.2	3767.2	3767.2	3767.2
2.5°	3767.2	3767.2	3748.5	3767.2	3767.2
5°	3752.2	3752.2	3737.3	3756.0	3759.7
7.5°	3726.0	3729.8	3714.8	3737.3	3741.0
10°	3688.6	3692.3	3684.8	3707.3	3711.0
12.5°	3643.6	3647.4	3647.4	3673.6	3677.3
15°	3587.5	3591.2	3595.0	3628.7	3632.4
17.5°	3516.3	3527.5	3535.0	3576.2	3583.7
20°	3441.4	3452.7	3467.6	3512.6	3520.1
22.5°	3355.3	3370.3	3396.5	3445.2	3456.4
25°	3265.4	3280.4	3314.1	3370.3	3381.5
27.5°	3164.3	3186.8	3228.0	3287.9	3302.9
30°	3059.5	3081.9	3130.6	3194.3	3216.7
32.5°	2947.1	2977.1	3033.2	3104.4	3126.9
35°	2831.0	2864.7	2924.6	3003.3	3033.2
37.5°	2707.4	2744.9	2816.0	2902.2	2939.6
40°	2580.1	2625.1	2700.0	2801.1	2842.3
42.5°	2452.8	2494.0	2587.6	2696.2	2741.2
45°	2321.7	2370.4	2467.8	2591.4	2636.3
47.5°	2186.9	2235.6	2351.7	2482.8	2524.0
50°	2052.1	2100.8	2231.9	2370.4	2419.1
52.5°	1906.1	1969.7	2119.5	2258.1	2306.8
55°	1775.0	1834.9	1988.5	2145.7	2198.2
57.5°	1625.2	1696.4	1864.9	2029.6	2085.8
60°	1486.7	1561.6	1741.3	1909.8	1966.0
62.5°	1344.4	1426.7	1617.7	1790.0	1853.6
65°	1190.8	1291.9	1494.2	1670.2	1733.8
67.5°	1052.3	1157.1	1370.6	1550.3	1606.5
70°	895.0	1022.3	1239.5	1419.3	1482.9
72.5°	760.2	887.5	1115.9	1291.9	1355.6
75°	617.9	756.4	984.9	1160.9	1217.0
77.5°	475.6	629.1	857.5	992.4	1011.1
80°	340.8	501.8	711.5	790.1	816.4
82.5°	239.7	385.7	524.3	576.7	591.7
85°	131.1	254.6	329.5	352.0	352.0
87.5°	56.2	108.6	131.1	134.8	138.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)