

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: P389593

Luminaire Tested: **24CZ2-130VHE-S-UNV-L935-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: P389593  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-130VHE-S-UNV-L935-CD2-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11643.4 lumens  
Efficiency: N/A  
Efficacy: 128.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

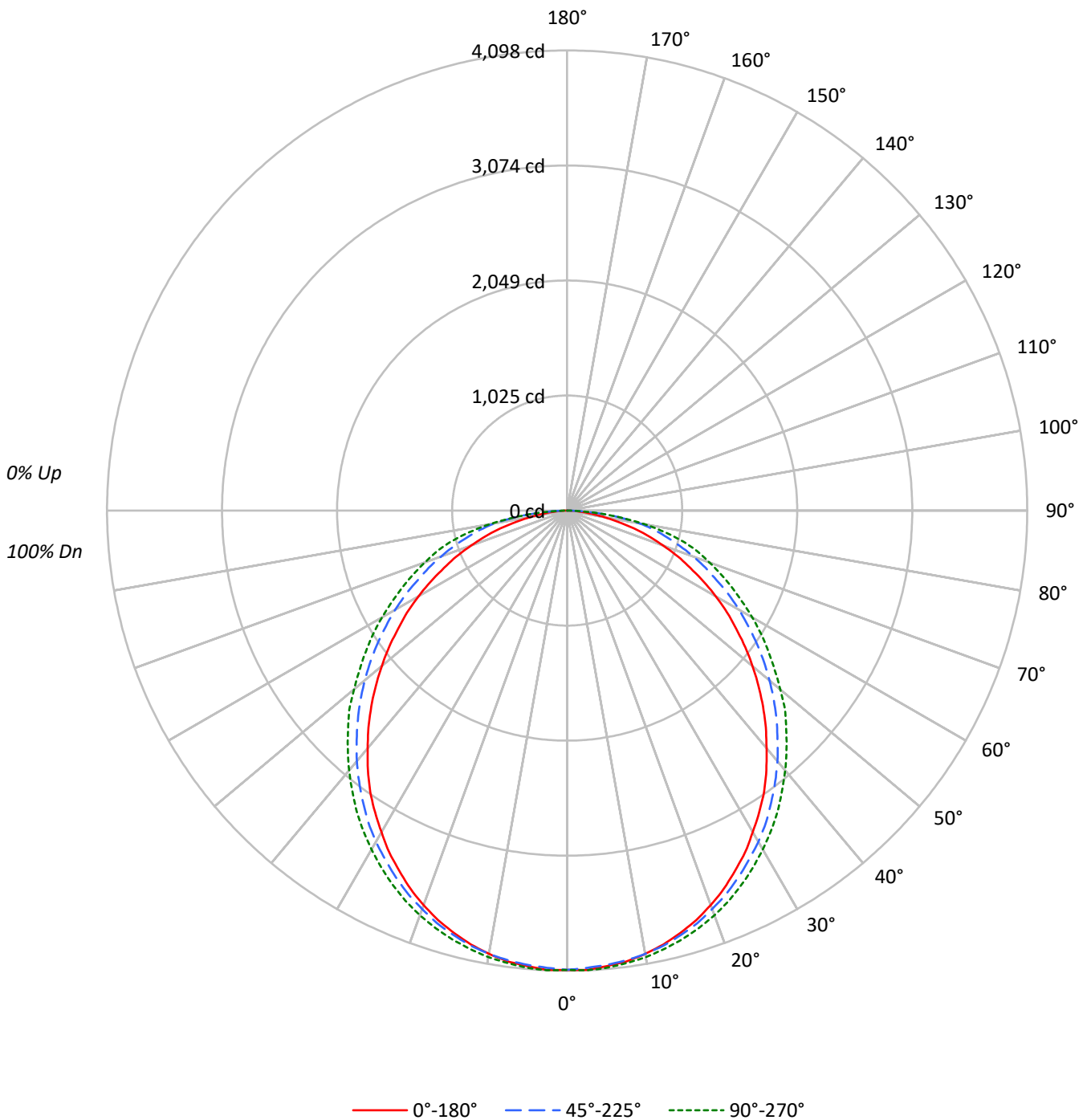
Input Watts (W): 90.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5504	5504	5504
5°	5500	5485	5520
10°	5477	5477	5518
15°	5425	5450	5507
20°	5354	5407	5491
25°	5254	5353	5458
30°	5137	5292	5413
35°	5024	5206	5370
40°	4852	5119	5307
45°	4694	5018	5250
50°	4513	4924	5187
55°	4312	4832	5136
60°	4110	4757	5126
65°	3850	4675	5157
70°	3565	4699	5296
75°	3191	4787	5595
80°	2579	5072	5473
85°	1941	4454	4340



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	387.2	3.3
10°-20°	1106.5	9.5
20°-30°	1663.3	14.3
30°-40°	1981.3	17.0
40°-50°	2027.7	17.4
50°-60°	1825.5	15.7
60°-70°	1433.6	12.3
70°-80°	930.5	8.0
80°-90°	287.8	2.5
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°	3157.0	27.1
0°-40°	5138.3	44.1
0°-60°	8991.5	77.2
0°-90°	11643.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11643.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4090	4090	4090	4090	4090	
5°	4072	4079	4061	4083	4087	387
15°	3894	3906	3913	3946	3954	1098
25°	3539	3569	3606	3665	3676	1630
35°	3059	3096	3170	3247	3269	1908
45°	2467	2526	2637	2737	2759	1902
55°	1838	1920	2060	2167	2189	1648
65°	1209	1302	1468	1590	1620	1204
75°	614	732	921	1047	1076	650
85°	126	233	288	281	281	152
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4090.4	4090.4	4090.4	4090.4	4090.4
2.5°	4094.1	4094.1	4075.6	4094.1	4097.8
5°	4071.9	4079.3	4060.8	4083.0	4086.7
7.5°	4049.7	4049.7	4038.6	4060.8	4064.5
10°	4009.0	4012.7	4009.0	4034.9	4038.6
12.5°	3957.3	3964.7	3968.4	3994.2	3997.9
15°	3894.4	3905.5	3912.9	3946.2	3953.6
17.5°	3824.1	3835.2	3853.7	3890.7	3898.1
20°	3739.1	3753.9	3776.0	3824.1	3835.2
22.5°	3646.6	3661.4	3698.4	3742.8	3761.2
25°	3539.3	3568.9	3605.9	3665.1	3676.2
27.5°	3432.1	3458.0	3506.1	3568.9	3583.7
30°	3306.3	3347.0	3406.2	3469.1	3483.9
32.5°	3184.3	3225.0	3295.3	3361.8	3380.3
35°	3058.6	3095.5	3169.5	3247.2	3269.4
37.5°	2914.3	2962.4	3043.8	3121.4	3143.6
40°	2762.7	2821.9	2914.3	2995.7	3021.6
42.5°	2618.4	2681.3	2773.8	2862.5	2892.1
45°	2466.8	2526.0	2636.9	2736.8	2759.0
47.5°	2311.5	2378.1	2496.4	2596.3	2633.2
50°	2156.2	2226.4	2352.2	2455.7	2477.9
52.5°	2000.8	2074.8	2207.9	2318.9	2330.0
55°	1838.1	1919.5	2060.0	2167.2	2189.4
57.5°	1690.2	1760.4	1912.1	2023.0	2048.9
60°	1527.4	1605.1	1767.8	1871.4	1904.7
62.5°	1372.1	1453.5	1623.6	1727.1	1756.7
65°	1209.4	1301.8	1468.3	1590.3	1619.9
67.5°	1068.8	1157.6	1335.1	1453.5	1483.0
70°	906.1	1006.0	1194.6	1316.6	1346.2
72.5°	765.6	869.1	1057.7	1176.1	1220.5
75°	613.9	732.3	920.9	1046.6	1076.2
77.5°	466.0	602.8	795.2	891.3	891.3
80°	332.9	477.1	654.6	699.0	706.4
82.5°	218.2	358.7	484.5	480.8	480.8
85°	125.7	233.0	288.5	281.1	281.1
87.5°	48.1	96.2	103.6	103.6	99.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)