

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: P388661

Luminaire Tested: **24CZ2-130VHE-UNV-L940-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: P388661  
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-L940-CD2-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11336.5 lumens  
Efficiency: N/A  
Efficacy: 125.0 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

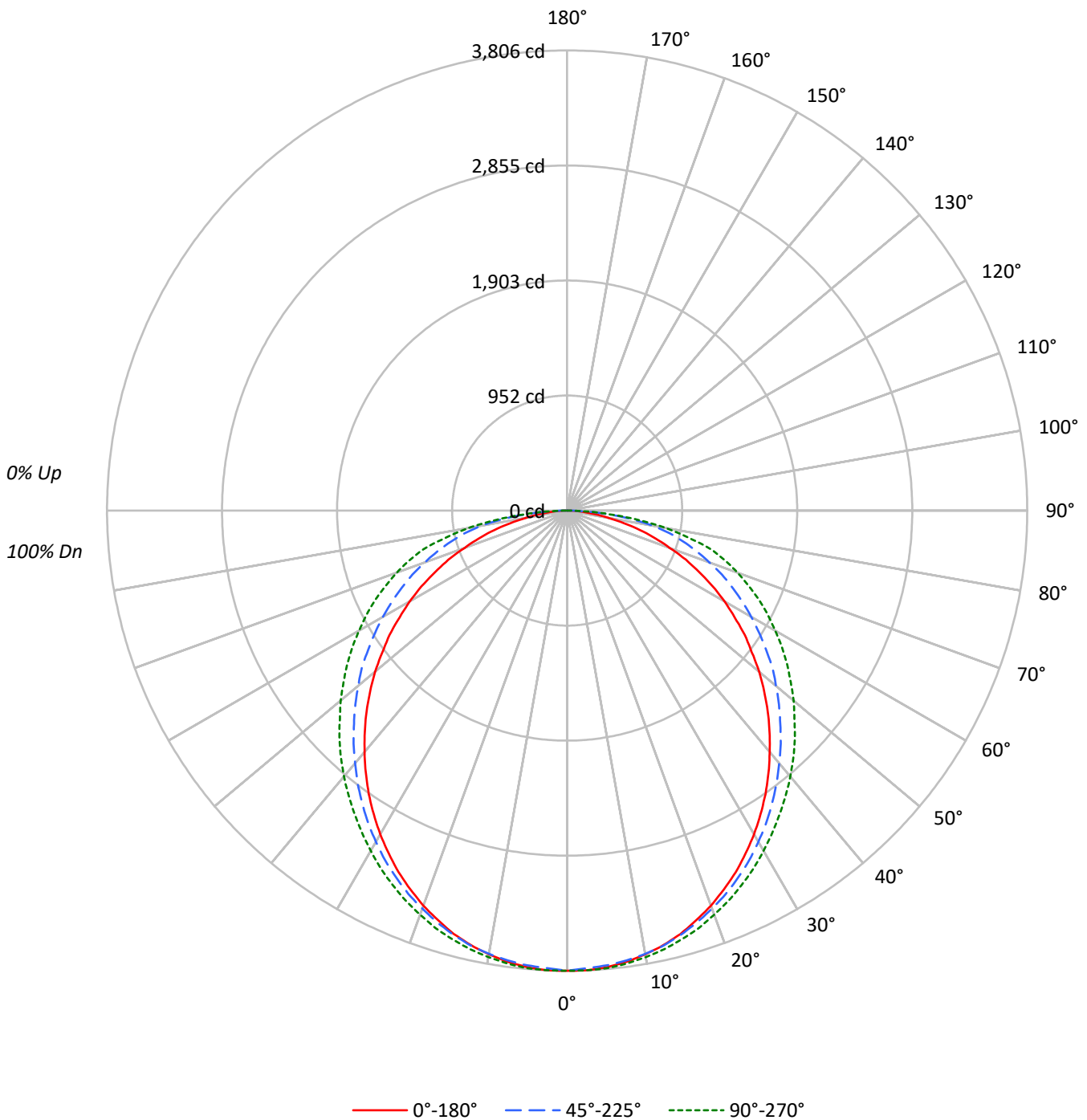
Input Watts (W): 90.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5121	5121	5121
5°	5120	5100	5130
10°	5092	5087	5123
15°	5049	5059	5112
20°	4979	5016	5092
25°	4898	4971	5072
30°	4802	4914	5049
35°	4698	4854	5034
40°	4579	4791	5044
45°	4464	4744	5068
50°	4340	4720	5116
55°	4207	4713	5210
60°	4042	4734	5345
65°	3830	4806	5577
70°	3557	4926	5894
75°	3245	5173	6392
80°	2668	5570	6391
85°	2044	5139	5490



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	360.0	3.2
10°-20°	1027.7	9.1
20°-30°	1546.5	13.6
30°-40°	1853.3	16.3
40°-50°	1931.4	17.0
50°-60°	1796.9	15.9
60°-70°	1480.0	13.1
70°-80°	1007.9	8.9
80°-90°	332.8	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°	2934.2	25.9
0°-40°	4787.5	42.2
0°-60°	8515.8	75.1
0°-90°	11336.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11336.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3806	3806	3806	3806	3806	
5°	3791	3791	3776	3795	3799	360
15°	3625	3628	3632	3666	3670	1021
25°	3299	3314	3348	3405	3416	1519
35°	2860	2894	2955	3034	3065	1788
45°	2346	2395	2493	2618	2664	1809
55°	1793	1854	2009	2168	2221	1599
65°	1203	1305	1510	1687	1752	1194
75°	624	764	995	1173	1230	658
85°	132	257	333	356	356	164
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3806.2	3806.2	3806.2	3806.2	3806.2
2.5°	3806.2	3806.2	3787.3	3806.2	3806.2
5°	3791.1	3791.1	3775.9	3794.8	3798.6
7.5°	3764.6	3768.4	3753.2	3775.9	3779.7
10°	3726.7	3730.5	3723.0	3745.7	3749.4
12.5°	3681.3	3685.1	3685.1	3711.6	3715.4
15°	3624.6	3628.4	3632.1	3666.2	3670.0
17.5°	3552.7	3564.0	3571.6	3613.2	3620.8
20°	3477.0	3488.4	3503.5	3548.9	3556.5
22.5°	3390.0	3405.1	3431.6	3480.8	3492.2
25°	3299.2	3314.3	3348.4	3405.1	3416.5
27.5°	3197.0	3219.7	3261.4	3321.9	3337.0
30°	3091.1	3113.8	3163.0	3227.3	3250.0
32.5°	2977.6	3007.9	3064.6	3136.5	3159.2
35°	2860.3	2894.4	2954.9	3034.4	3064.6
37.5°	2735.5	2773.3	2845.2	2932.2	2970.0
40°	2606.8	2652.2	2727.9	2830.1	2871.7
42.5°	2478.2	2519.8	2614.4	2724.1	2769.5
45°	2345.8	2394.9	2493.3	2618.2	2663.6
47.5°	2209.6	2258.7	2376.0	2508.5	2550.1
50°	2073.4	2122.5	2255.0	2394.9	2444.1
52.5°	1925.8	1990.1	2141.5	2281.4	2330.6
55°	1793.4	1853.9	2009.0	2167.9	2220.9
57.5°	1642.0	1713.9	1884.2	2050.7	2107.4
60°	1502.0	1577.7	1759.3	1929.6	1986.3
62.5°	1358.3	1441.5	1634.5	1808.5	1872.8
65°	1203.1	1305.3	1509.6	1687.4	1751.8
67.5°	1063.2	1169.1	1384.8	1566.4	1623.1
70°	904.3	1032.9	1252.3	1433.9	1498.3
72.5°	768.0	896.7	1127.5	1305.3	1369.6
75°	624.3	764.3	995.1	1172.9	1229.6
77.5°	480.5	635.6	866.4	1002.6	1021.5
80°	344.3	507.0	718.9	798.3	824.8
82.5°	242.1	389.7	529.7	582.7	597.8
85°	132.4	257.3	332.9	355.6	355.6
87.5°	56.8	109.7	132.4	136.2	140.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)