

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: P388373

Luminaire Tested: **24CZ2-130VHE-SQR-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: P388373  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-130VHE-SQR-UNV-L935-CD2-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10775.8 lumens  
Efficiency: N/A  
Efficacy: 118.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

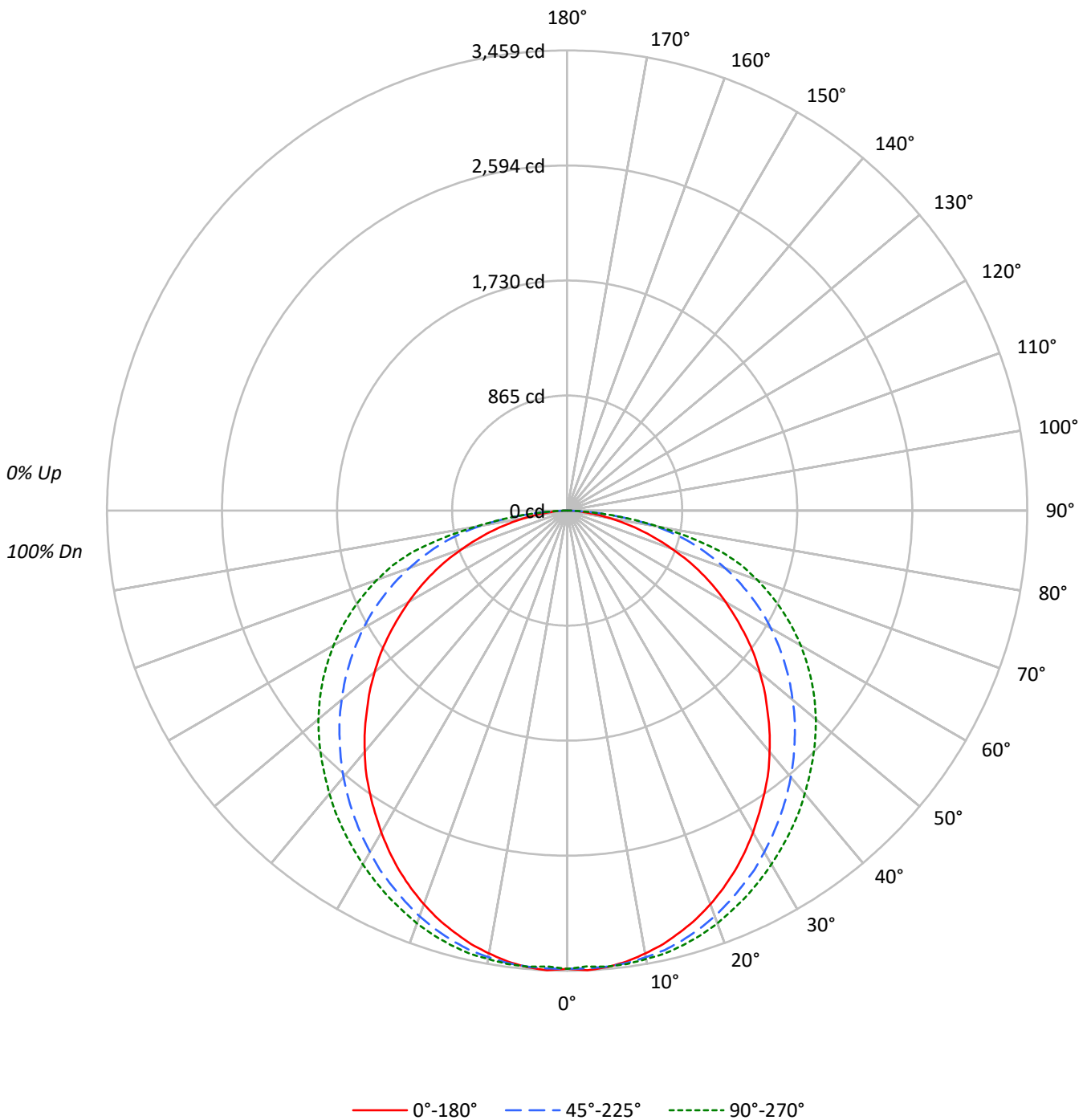
Input Watts (W): 90.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	81	75	95	87	80	74	83	78	73		80	75	71		77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51		62	55	50		60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44		55	49	43		54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38		50	43	38		48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34		45	39	33		44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30		42	35	30		40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27		38	32	27		37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24		36	29	24		35	29	24	22

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

	0°	45°	90°
0°	4635	4635	4635
5°	4652	4647	4647
10°	4618	4657	4677
15°	4570	4659	4709
20°	4509	4647	4728
25°	4432	4622	4744
30°	4340	4605	4771
35°	4249	4594	4816
40°	4156	4594	4881
45°	4049	4604	4977
50°	3955	4633	5110
55°	3840	4683	5267
60°	3706	4759	5458
65°	3546	4849	5687
70°	3290	4969	5977
75°	2978	5142	6252
80°	2509	5156	5377
85°	1922	3900	3900



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	327.0	3.0
10°-20°	940.7	8.7
20°-30°	1428.9	13.3
30°-40°	1738.0	16.1
40°-50°	1850.4	17.2
50°-60°	1762.4	16.4
60°-70°	1473.9	13.7
70°-80°	982.7	9.1
80°-90°	271.9	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°	2696.5	25.0
0°-40°	4434.5	41.2
0°-60°	8047.4	74.7
0°-90°	10775.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10775.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3444	3444	3444	3444	3444	
5°	3444	3423	3441	3441	3441	327
15°	3281	3288	3345	3370	3380	925
25°	2985	3025	3114	3167	3195	1375
35°	2587	2662	2797	2889	2932	1619
45°	2128	2242	2420	2555	2615	1645
55°	1637	1779	1996	2171	2245	1463
65°	1114	1277	1523	1712	1786	1100
75°	573	754	989	1156	1203	607
85°	124	231	253	249	253	150
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3444.5	3444.5	3444.5	3444.5	3444.5
2.5°	3458.7	3433.8	3444.5	3444.5	3430.2
5°	3444.5	3423.1	3440.9	3440.9	3440.9
7.5°	3419.6	3401.8	3430.2	3437.4	3437.4
10°	3380.4	3373.3	3408.9	3419.6	3423.1
12.5°	3337.7	3334.2	3384.0	3398.2	3408.9
15°	3280.8	3287.9	3344.8	3369.7	3380.4
17.5°	3220.3	3234.5	3298.6	3334.2	3344.8
20°	3149.1	3170.5	3245.2	3280.8	3302.1
22.5°	3070.8	3102.9	3181.2	3223.9	3248.8
25°	2985.4	3024.6	3113.5	3166.9	3195.4
27.5°	2892.9	2942.7	3045.9	3106.4	3134.9
30°	2793.3	2850.2	2964.1	3035.3	3070.8
32.5°	2690.1	2757.7	2882.3	2960.5	3003.2
35°	2586.9	2661.6	2796.9	2889.4	2932.1
37.5°	2483.7	2558.4	2707.9	2807.5	2860.9
40°	2366.3	2455.3	2615.4	2725.7	2779.1
42.5°	2252.4	2348.5	2519.3	2640.3	2697.2
45°	2127.9	2241.8	2419.7	2554.9	2615.4
47.5°	2014.0	2127.9	2320.0	2462.4	2530.0
50°	1889.5	2010.5	2213.3	2369.9	2441.0
52.5°	1768.5	1893.0	2106.5	2273.8	2344.9
55°	1636.8	1779.2	1996.2	2170.6	2245.3
57.5°	1505.2	1658.2	1882.4	2063.8	2138.6
60°	1377.1	1533.6	1768.5	1950.0	2028.3
62.5°	1249.0	1405.5	1651.1	1836.1	1910.8
65°	1113.8	1277.4	1523.0	1711.6	1786.3
67.5°	978.5	1149.3	1394.9	1583.5	1654.6
70°	836.2	1017.7	1263.2	1448.2	1519.4
72.5°	704.6	886.0	1128.0	1309.5	1377.1
75°	572.9	754.4	989.2	1156.5	1202.7
77.5°	444.8	626.3	836.2	946.5	957.2
80°	323.8	494.6	665.4	697.4	693.9
82.5°	217.1	370.1	459.0	462.6	473.3
85°	124.5	231.3	252.6	249.1	252.6
87.5°	49.8	81.8	71.2	53.4	53.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)