

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: P388369

Luminaire Tested: **24CZ2-130VHE-SQR-UNV-L930-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: P388369  
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-L930-CD2-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10385.3 lumens  
Efficiency: N/A  
Efficacy: 114.5 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

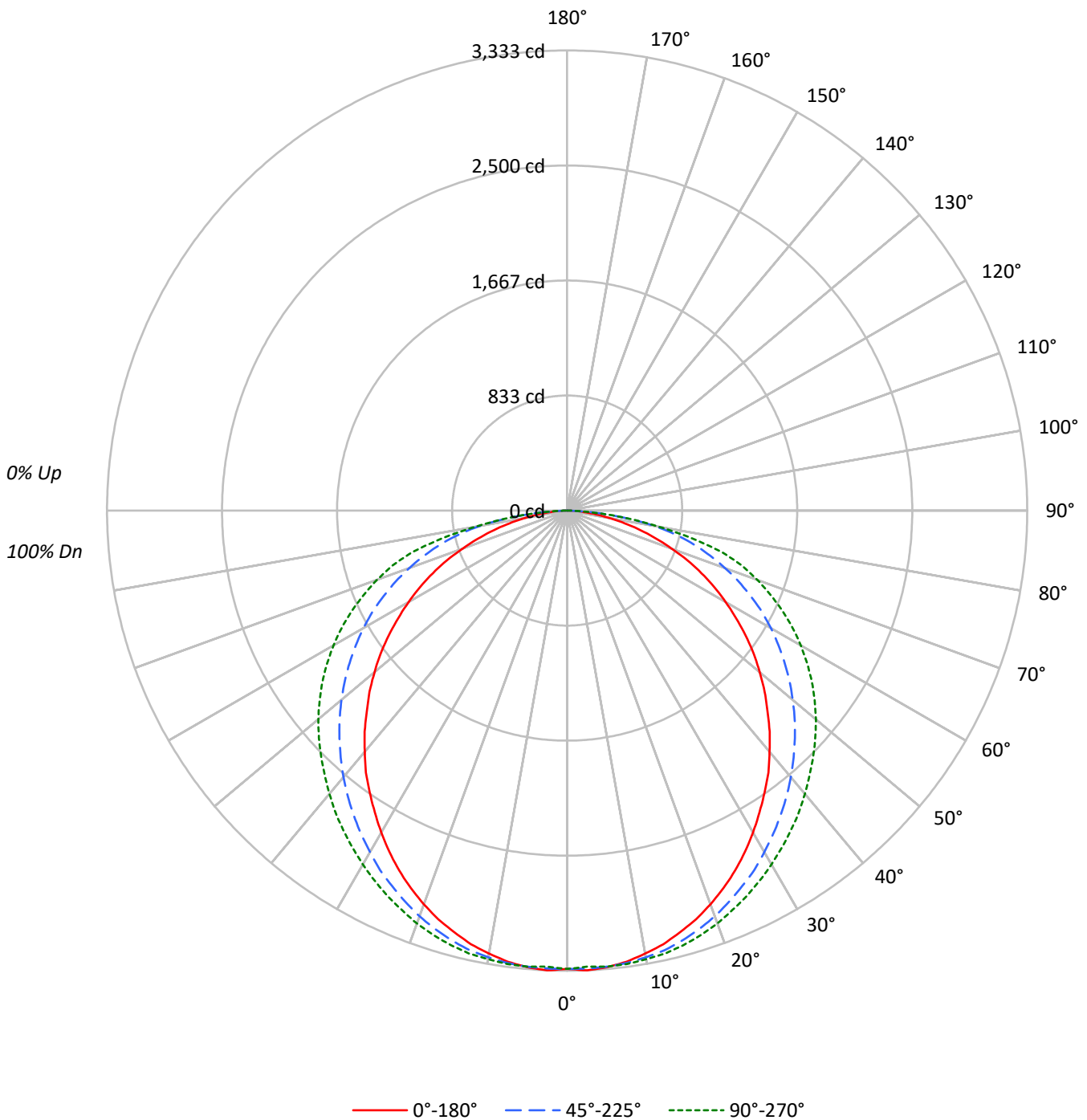
Input Watts (W): 90.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P388369

CATALOG NUMBER: 24CZ2-130VHE-SQR-UNV-L930-CD2-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P388369

CATALOG NUMBER: 24CZ2-130VHE-SQR-UNV-L930-CD2-SWPD1-U

**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°	4466	4466	4466
5°	4484	4479	4479
10°	4451	4489	4507
15°	4404	4490	4538
20°	4346	4478	4557
25°	4272	4455	4572
30°	4183	4438	4598
35°	4095	4427	4641
40°	4005	4427	4704
45°	3902	4437	4796
50°	3812	4465	4924
55°	3700	4513	5076
60°	3571	4587	5260
65°	3417	4673	5481
70°	3170	4789	5760
75°	2870	4956	6026
80°	2418	4969	5181
85°	1853	3759	3759



TEST NUMBER: P388369

CATALOG NUMBER: 24CZ2-130VHE-SQR-UNV-L930-CD2-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	315.1	3.0
10°-20°	906.6	8.7
20°-30°	1377.1	13.3
30°-40°	1675.0	16.1
40°-50°	1783.4	17.2
50°-60°	1698.6	16.4
60°-70°	1420.5	13.7
70°-80°	947.1	9.1
80°-90°	262.0	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°	2598.8	25.0
0°-40°	4273.8	41.2
0°-60°	7755.7	74.7
0°-90°	10385.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10385.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3320	3320	3320	3320	3320	
5°	3320	3299	3316	3316	3316	315
15°	3162	3169	3224	3248	3258	892
25°	2877	2915	3001	3052	3080	1325
35°	2493	2565	2696	2785	2826	1560
45°	2051	2160	2332	2462	2521	1585
55°	1578	1715	1924	2092	2164	1410
65°	1073	1231	1468	1650	1722	1060
75°	552	727	953	1115	1159	585
85°	120	223	244	240	244	145
90°	0	0	0	0	0	



TEST NUMBER: P388369

CATALOG NUMBER: 24CZ2-130VHE-SQR-UNV-L930-CD2-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3319.6	3319.6	3319.6	3319.6	3319.6
2.5°	3333.4	3309.4	3319.6	3319.6	3305.9
5°	3319.6	3299.1	3316.2	3316.2	3316.2
7.5°	3295.6	3278.5	3305.9	3312.8	3312.8
10°	3257.9	3251.1	3285.4	3295.6	3299.1
12.5°	3216.8	3213.3	3261.3	3275.1	3285.4
15°	3161.9	3168.8	3223.6	3247.6	3257.9
17.5°	3103.6	3117.3	3179.0	3213.3	3223.6
20°	3035.0	3055.6	3127.6	3161.9	3182.5
22.5°	2959.6	2990.4	3065.9	3107.0	3131.0
25°	2877.3	2915.0	3000.7	3052.2	3079.6
27.5°	2788.1	2836.1	2935.6	2993.9	3021.3
30°	2692.1	2746.9	2856.7	2925.3	2959.6
32.5°	2592.6	2657.8	2777.8	2853.3	2894.4
35°	2493.2	2565.2	2695.5	2784.7	2825.8
37.5°	2393.7	2465.7	2609.8	2705.8	2757.2
40°	2280.5	2366.3	2520.6	2626.9	2678.4
42.5°	2170.8	2263.4	2428.0	2544.6	2599.5
45°	2050.8	2160.5	2332.0	2462.3	2520.6
47.5°	1941.0	2050.8	2236.0	2373.1	2438.3
50°	1821.0	1937.6	2133.1	2284.0	2352.6
52.5°	1704.4	1824.4	2030.2	2191.4	2260.0
55°	1577.5	1714.7	1923.9	2091.9	2163.9
57.5°	1450.6	1598.1	1814.1	1989.0	2061.1
60°	1327.2	1478.1	1704.4	1879.3	1954.8
62.5°	1203.7	1354.6	1591.2	1769.6	1841.6
65°	1073.4	1231.2	1467.8	1649.5	1721.6
67.5°	943.1	1107.7	1344.3	1526.1	1594.7
70°	805.9	980.8	1217.4	1395.8	1464.3
72.5°	679.0	853.9	1087.1	1262.0	1327.2
75°	552.1	727.0	953.4	1114.6	1159.1
77.5°	428.7	603.6	805.9	912.2	922.5
80°	312.1	476.7	641.3	672.2	668.7
82.5°	209.2	356.7	442.4	445.8	456.1
85°	120.0	222.9	243.5	240.1	243.5
87.5°	48.0	78.9	68.6	51.4	51.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)