

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: P389521

Luminaire Tested: **24CZ2-100VHE-S-UNV-L935-CD1-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: P389521  
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: 24CZ2-100VHE-S-UNV-L935-CD1-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**

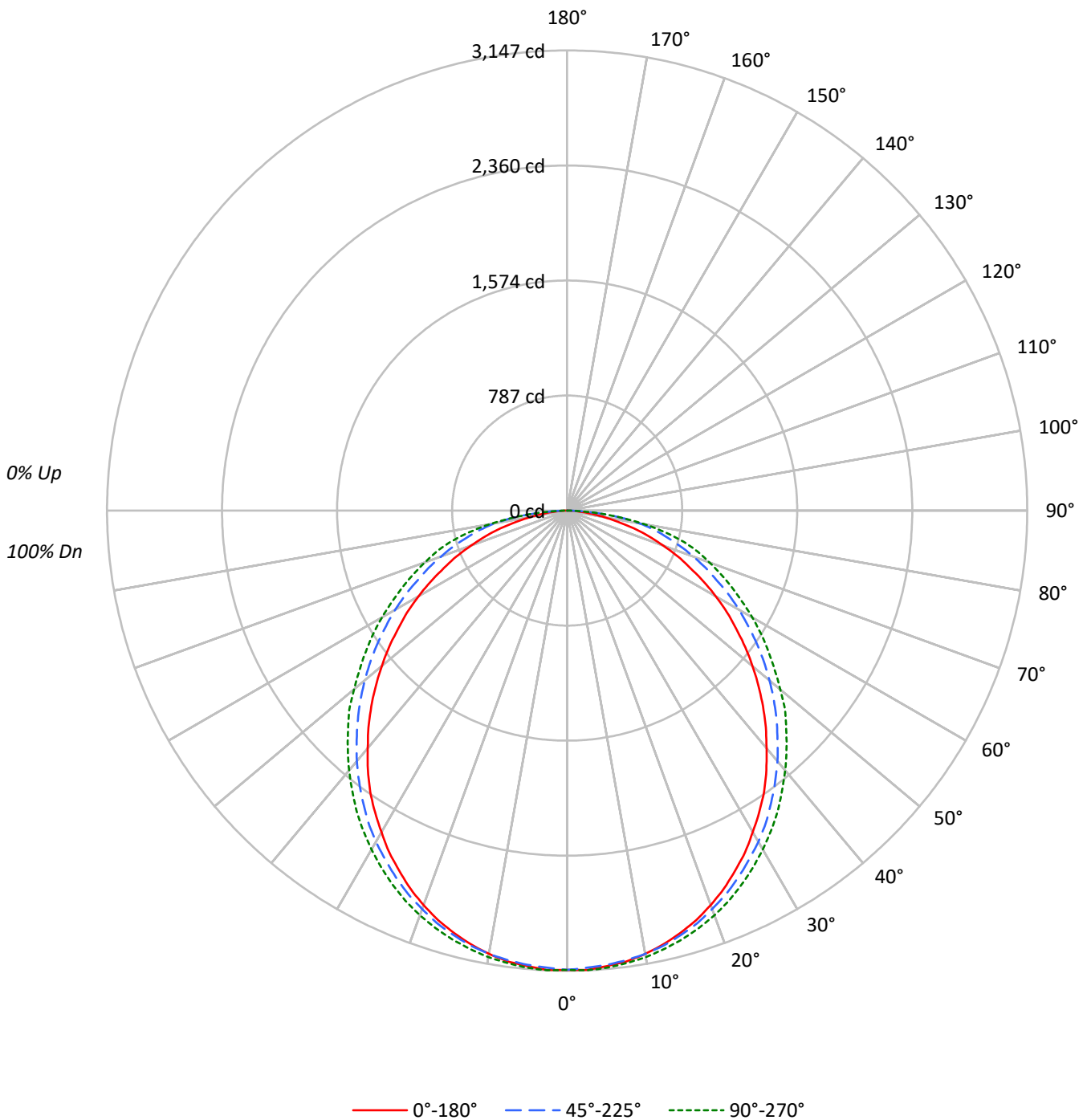
Lumens per Lamp: N/A  
Luminaire Lumens: 8941.1 lumens  
Efficiency: N/A  
Efficacy: 128.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: P389521

CATALOG NUMBER: 24CZ2-100VHE-S-UNV-L935-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P389521

CATALOG NUMBER: 24CZ2-100VHE-S-UNV-L935-CD1-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	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°	4226	4226	4226
5°	4223	4212	4239
10°	4206	4206	4237
15°	4166	4185	4229
20°	4111	4152	4217
25°	4035	4111	4191
30°	3945	4064	4156
35°	3858	3998	4124
40°	3726	3931	4075
45°	3604	3853	4031
50°	3466	3781	3983
55°	3311	3711	3944
60°	3156	3653	3936
65°	2957	3590	3960
70°	2737	3609	4067
75°	2451	3676	4296
80°	1980	3895	4203
85°	1491	3419	3331



TEST NUMBER: P389521

CATALOG NUMBER: 24CZ2-100VHE-S-UNV-L935-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	297.4	3.3
10°-20°	849.7	9.5
20°-30°	1277.3	14.3
30°-40°	1521.4	17.0
40°-50°	1557.1	17.4
50°-60°	1401.9	15.7
60°-70°	1100.9	12.3
70°-80°	714.5	8.0
80°-90°	221.0	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°	2424.3	27.1
0°-40°	3945.7	44.1
0°-60°	6904.7	77.2
0°-90°	8941.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8941.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3141	3141	3141	3141	3141	
5°	3127	3132	3118	3135	3138	297
15°	2990	2999	3005	3030	3036	843
25°	2718	2741	2769	2814	2823	1252
35°	2349	2377	2434	2494	2511	1465
45°	1894	1940	2025	2102	2119	1460
55°	1412	1474	1582	1664	1681	1265
65°	929	1000	1128	1221	1244	924
75°	471	562	707	804	826	499
85°	97	179	222	216	216	117
90°	0	0	0	0	0	



TEST NUMBER: P389521

CATALOG NUMBER: 24CZ2-100VHE-S-UNV-L935-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3141.1	3141.1	3141.1	3141.1	3141.1
2.5°	3143.9	3143.9	3129.7	3143.9	3146.7
5°	3126.9	3132.5	3118.3	3135.4	3138.2
7.5°	3109.8	3109.8	3101.3	3118.3	3121.2
10°	3078.6	3081.4	3078.6	3098.5	3101.3
12.5°	3038.8	3044.5	3047.3	3067.2	3070.1
15°	2990.5	2999.1	3004.7	3030.3	3036.0
17.5°	2936.6	2945.1	2959.3	2987.7	2993.4
20°	2871.3	2882.6	2899.7	2936.6	2945.1
22.5°	2800.3	2811.6	2840.0	2874.1	2888.3
25°	2717.9	2740.6	2769.0	2814.5	2823.0
27.5°	2635.5	2655.4	2692.3	2740.6	2752.0
30°	2539.0	2570.2	2615.7	2663.9	2675.3
32.5°	2445.3	2476.5	2530.5	2581.6	2595.8
35°	2348.7	2377.1	2433.9	2493.5	2510.6
37.5°	2237.9	2274.9	2337.3	2397.0	2414.0
40°	2121.5	2166.9	2237.9	2300.4	2320.3
42.5°	2010.7	2059.0	2130.0	2198.2	2220.9
45°	1894.3	1939.7	2024.9	2101.6	2118.7
47.5°	1775.0	1826.1	1917.0	1993.7	2022.1
50°	1655.7	1709.7	1806.3	1885.8	1902.8
52.5°	1536.5	1593.3	1695.5	1780.7	1789.2
55°	1411.5	1474.0	1581.9	1664.3	1681.3
57.5°	1297.9	1351.9	1468.3	1553.5	1573.4
60°	1172.9	1232.6	1357.5	1437.1	1462.6
62.5°	1053.6	1116.1	1246.8	1326.3	1349.0
65°	928.7	999.7	1127.5	1221.2	1243.9
67.5°	820.8	888.9	1025.2	1116.1	1138.8
70°	695.8	772.5	917.3	1011.0	1033.8
72.5°	587.9	667.4	812.2	903.1	937.2
75°	471.4	562.3	707.2	803.7	826.4
77.5°	357.8	462.9	610.6	684.4	684.4
80°	255.6	366.4	502.7	536.8	542.4
82.5°	167.6	275.5	372.0	369.2	369.2
85°	96.6	178.9	221.5	215.8	215.8
87.5°	36.9	73.8	79.5	79.5	76.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)