

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: P388583

Luminaire Tested: **24CZ2-100VHE-UNV-L930-CD1-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: P388583  
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: 24CZ2-100VHE-UNV-L930-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8408.3 lumens  
Efficiency: N/A  
Efficacy: 120.8 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

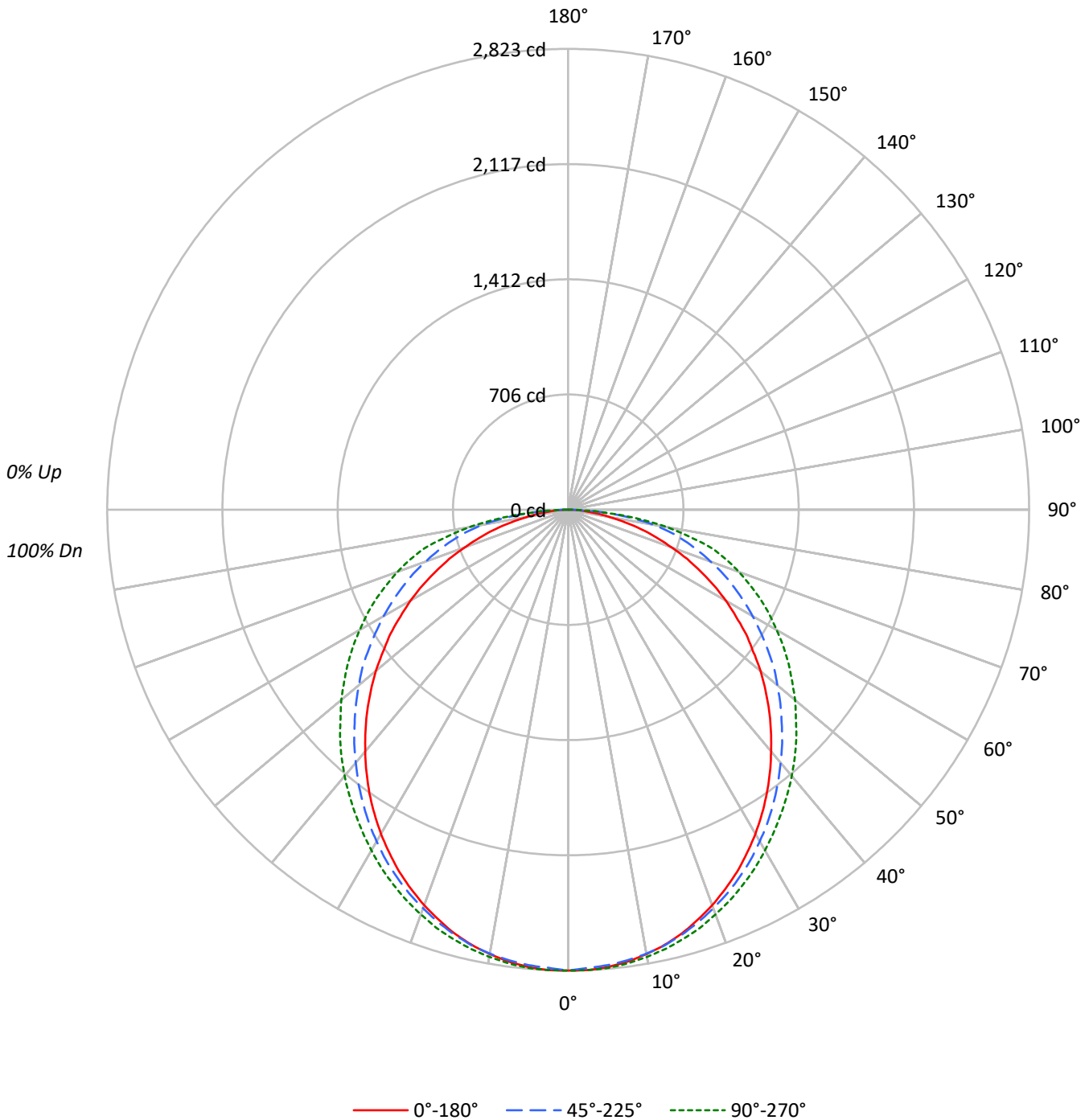
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P388583

CATALOG NUMBER: 24CZ2-100VHE-UNV-L930-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P388583

CATALOG NUMBER: 24CZ2-100VHE-UNV-L930-CD1-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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67					67			
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56					56			
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48					48			
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36					36			
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32					32			
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28					28			
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25					25			
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23					23			

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

	0°	45°	90°
0°	3798	3798	3798
5°	3798	3783	3805
10°	3776	3773	3800
15°	3745	3753	3792
20°	3693	3721	3777
25°	3633	3687	3762
30°	3562	3645	3745
35°	3485	3600	3733
40°	3396	3554	3741
45°	3311	3519	3759
50°	3219	3501	3795
55°	3120	3495	3864
60°	2998	3511	3965
65°	2841	3565	4137
70°	2638	3654	4372
75°	2407	3837	4741
80°	1979	4131	4740
85°	1516	3812	4072



TEST NUMBER: P388583

CATALOG NUMBER: 24CZ2-100VHE-UNV-L930-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	267.0	3.2
10°-20°	762.2	9.1
20°-30°	1147.1	13.6
30°-40°	1374.6	16.3
40°-50°	1432.5	17.0
50°-60°	1332.8	15.9
60°-70°	1097.7	13.1
70°-80°	747.6	8.9
80°-90°	246.8	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°	2176.3	25.9
0°-40°	3550.9	42.2
0°-60°	6316.2	75.1
0°-90°	8408.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8408.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2823	2823	2823	2823	2823	
5°	2812	2812	2801	2815	2817	267
15°	2688	2691	2694	2719	2722	757
25°	2447	2458	2484	2526	2534	1126
35°	2122	2147	2192	2251	2273	1326
45°	1740	1776	1849	1942	1976	1342
55°	1330	1375	1490	1608	1647	1186
65°	892	968	1120	1252	1299	886
75°	463	567	738	870	912	488
85°	98	191	247	264	264	122
90°	0	0	0	0	0	



TEST NUMBER: P388583

CATALOG NUMBER: 24CZ2-100VHE-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2823.1	2823.1	2823.1	2823.1	2823.1
2.5°	2823.1	2823.1	2809.0	2823.1	2823.1
5°	2811.8	2811.8	2800.6	2814.6	2817.4
7.5°	2792.2	2795.0	2783.8	2800.6	2803.4
10°	2764.1	2766.9	2761.3	2778.2	2781.0
12.5°	2730.5	2733.3	2733.3	2752.9	2755.7
15°	2688.4	2691.2	2694.0	2719.2	2722.0
17.5°	2635.0	2643.5	2649.1	2679.9	2685.6
20°	2578.9	2587.3	2598.6	2632.2	2637.8
22.5°	2514.4	2525.6	2545.2	2581.7	2590.1
25°	2447.0	2458.2	2483.5	2525.6	2534.0
27.5°	2371.3	2388.1	2419.0	2463.9	2475.1
30°	2292.7	2309.5	2346.0	2393.7	2410.5
32.5°	2208.5	2230.9	2273.0	2326.4	2343.2
35°	2121.5	2146.8	2191.7	2250.6	2273.0
37.5°	2028.9	2057.0	2110.3	2174.8	2202.9
40°	1933.5	1967.2	2023.3	2099.1	2129.9
42.5°	1838.1	1868.9	1939.1	2020.5	2054.2
45°	1739.9	1776.3	1849.3	1941.9	1975.6
47.5°	1638.8	1675.3	1762.3	1860.5	1891.4
50°	1537.8	1574.3	1672.5	1776.3	1812.8
52.5°	1428.4	1476.1	1588.3	1692.2	1728.6
55°	1330.1	1375.0	1490.1	1608.0	1647.3
57.5°	1217.9	1271.2	1397.5	1521.0	1563.1
60°	1114.1	1170.2	1304.9	1431.2	1473.3
62.5°	1007.4	1069.2	1212.3	1341.4	1389.1
65°	892.4	968.1	1119.7	1251.6	1299.3
67.5°	788.5	867.1	1027.1	1161.8	1203.9
70°	670.7	766.1	928.9	1063.6	1111.3
72.5°	569.7	665.1	836.3	968.1	1015.9
75°	463.0	566.9	738.0	869.9	912.0
77.5°	356.4	471.4	642.6	743.6	757.7
80°	255.4	376.0	533.2	592.1	611.8
82.5°	179.6	289.0	392.9	432.2	443.4
85°	98.2	190.8	246.9	263.8	263.8
87.5°	42.1	81.4	98.2	101.0	103.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)