

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: P389528

Luminaire Tested: **24CZ2-100VHE-S-UNV-L950-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: P389528  
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-L950-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9709.0 lumens  
Efficiency: N/A  
Efficacy: 139.5 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

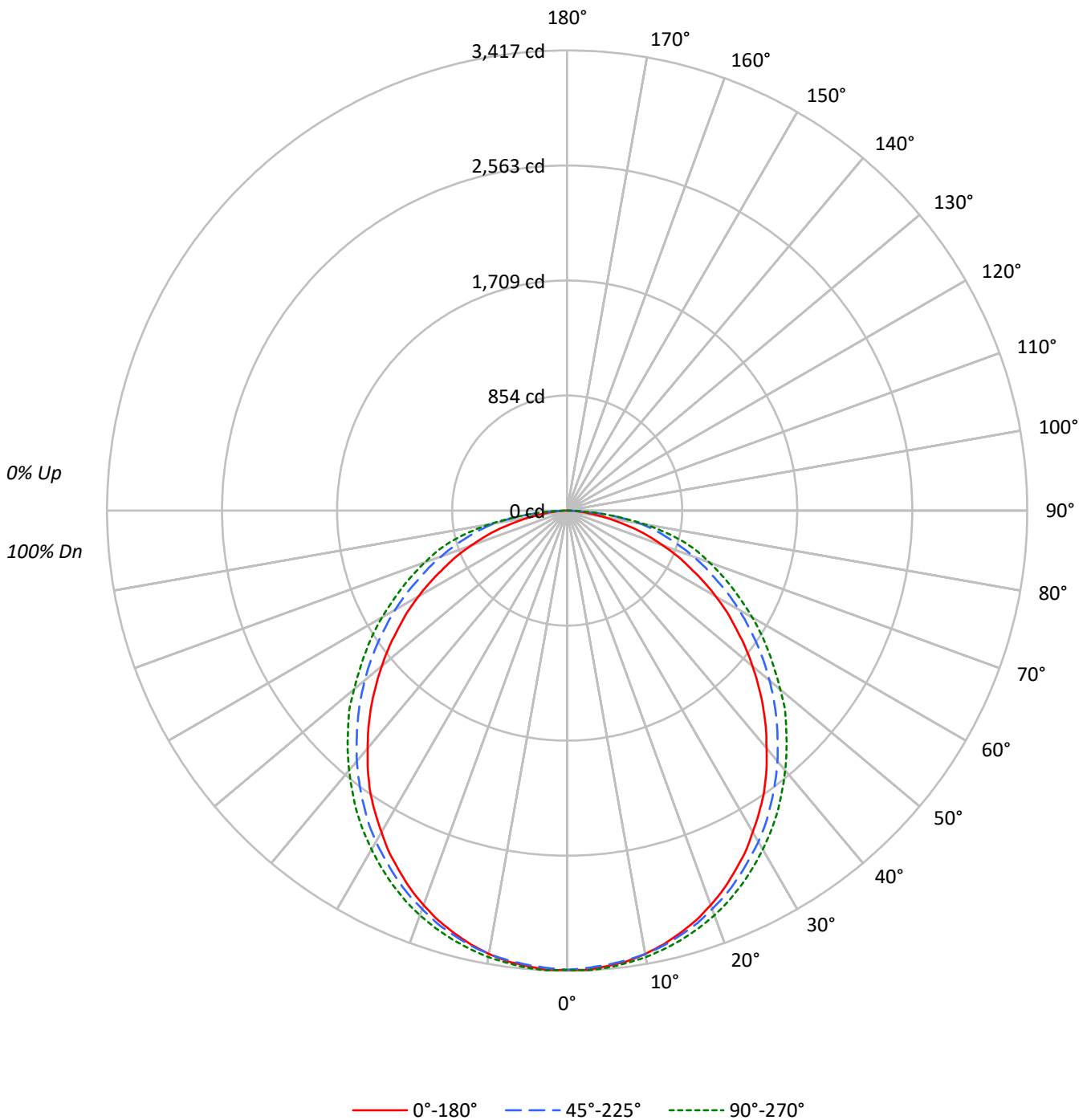
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P389528

CATALOG NUMBER: 24CZ2-100VHE-S-UNV-L950-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P389528

CATALOG NUMBER: 24CZ2-100VHE-S-UNV-L950-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	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°	4589	4589	4589
5°	4586	4573	4603
10°	4567	4567	4601
15°	4523	4545	4592
20°	4464	4508	4579
25°	4381	4464	4551
30°	4283	4413	4513
35°	4189	4341	4478
40°	4046	4268	4425
45°	3914	4184	4378
50°	3763	4106	4325
55°	3595	4030	4283
60°	3427	3967	4274
65°	3210	3898	4301
70°	2972	3919	4416
75°	2661	3992	4665
80°	2151	4230	4564
85°	1619	3713	3619



TEST NUMBER: P389528

CATALOG NUMBER: 24CZ2-100VHE-S-UNV-L950-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	322.9	3.3
10°-20°	922.7	9.5
20°-30°	1387.0	14.3
30°-40°	1652.1	17.0
40°-50°	1690.8	17.4
50°-60°	1522.3	15.7
60°-70°	1195.5	12.3
70°-80°	775.9	8.0
80°-90°	240.0	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°	2632.5	27.1
0°-40°	4284.6	44.1
0°-60°	7497.7	77.2
0°-90°	9709.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9709.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3411	3411	3411	3411	3411	
5°	3395	3402	3386	3405	3408	323
15°	3247	3257	3263	3291	3297	916
25°	2951	2976	3007	3056	3065	1360
35°	2550	2581	2643	2708	2726	1591
45°	2057	2106	2199	2282	2301	1586
55°	1533	1601	1718	1807	1826	1374
65°	1008	1086	1224	1326	1351	1004
75°	512	611	768	873	897	542
85°	105	194	240	234	234	127
90°	0	0	0	0	0	



TEST NUMBER: P389528

CATALOG NUMBER: 24CZ2-100VHE-S-UNV-L950-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3410.8	3410.8	3410.8	3410.8	3410.8
2.5°	3413.9	3413.9	3398.5	3413.9	3417.0
5°	3395.4	3401.6	3386.2	3404.7	3407.8
7.5°	3376.9	3376.9	3367.7	3386.2	3389.2
10°	3343.0	3346.1	3343.0	3364.6	3367.7
12.5°	3299.8	3306.0	3309.1	3330.7	3333.7
15°	3247.4	3256.6	3262.8	3290.6	3296.7
17.5°	3188.8	3198.0	3213.5	3244.3	3250.5
20°	3117.9	3130.2	3148.7	3188.8	3198.0
22.5°	3040.8	3053.1	3083.9	3120.9	3136.4
25°	2951.3	2976.0	3006.8	3056.2	3065.4
27.5°	2861.9	2883.5	2923.6	2976.0	2988.3
30°	2757.0	2791.0	2840.3	2892.7	2905.1
32.5°	2655.3	2689.2	2747.8	2803.3	2818.7
35°	2550.4	2581.3	2642.9	2707.7	2726.2
37.5°	2430.1	2470.2	2538.1	2602.8	2621.3
40°	2303.7	2353.0	2430.1	2498.0	2519.6
42.5°	2183.4	2235.9	2313.0	2387.0	2411.6
45°	2057.0	2106.3	2198.8	2282.1	2300.6
47.5°	1927.5	1983.0	2081.7	2164.9	2195.8
50°	1797.9	1856.5	1961.4	2047.7	2066.2
52.5°	1668.4	1730.1	1841.1	1933.6	1942.9
55°	1532.7	1600.6	1717.8	1807.2	1825.7
57.5°	1409.4	1468.0	1594.4	1686.9	1708.5
60°	1273.7	1338.4	1474.1	1560.5	1588.2
62.5°	1144.1	1212.0	1353.8	1440.2	1464.9
65°	1008.4	1085.5	1224.3	1326.1	1350.8
67.5°	891.3	965.3	1113.3	1212.0	1236.7
70°	755.6	838.8	996.1	1097.9	1122.6
72.5°	638.4	724.7	882.0	980.7	1017.7
75°	511.9	610.6	767.9	872.8	897.4
77.5°	388.6	502.7	663.0	743.2	743.2
80°	277.6	397.8	545.9	582.9	589.0
82.5°	182.0	299.1	404.0	400.9	400.9
85°	104.9	194.3	240.5	234.4	234.4
87.5°	40.1	80.2	86.4	86.4	83.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)