

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: P389162

Luminaire Tested: **22CZ2-24VHE-S-UNV-L935-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: P389162  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-24VHE-S-UNV-L935-CD1-U  
Description: 2x2 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: 2221.8 lumens  
Efficiency: N/A  
Efficacy: 127.0 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

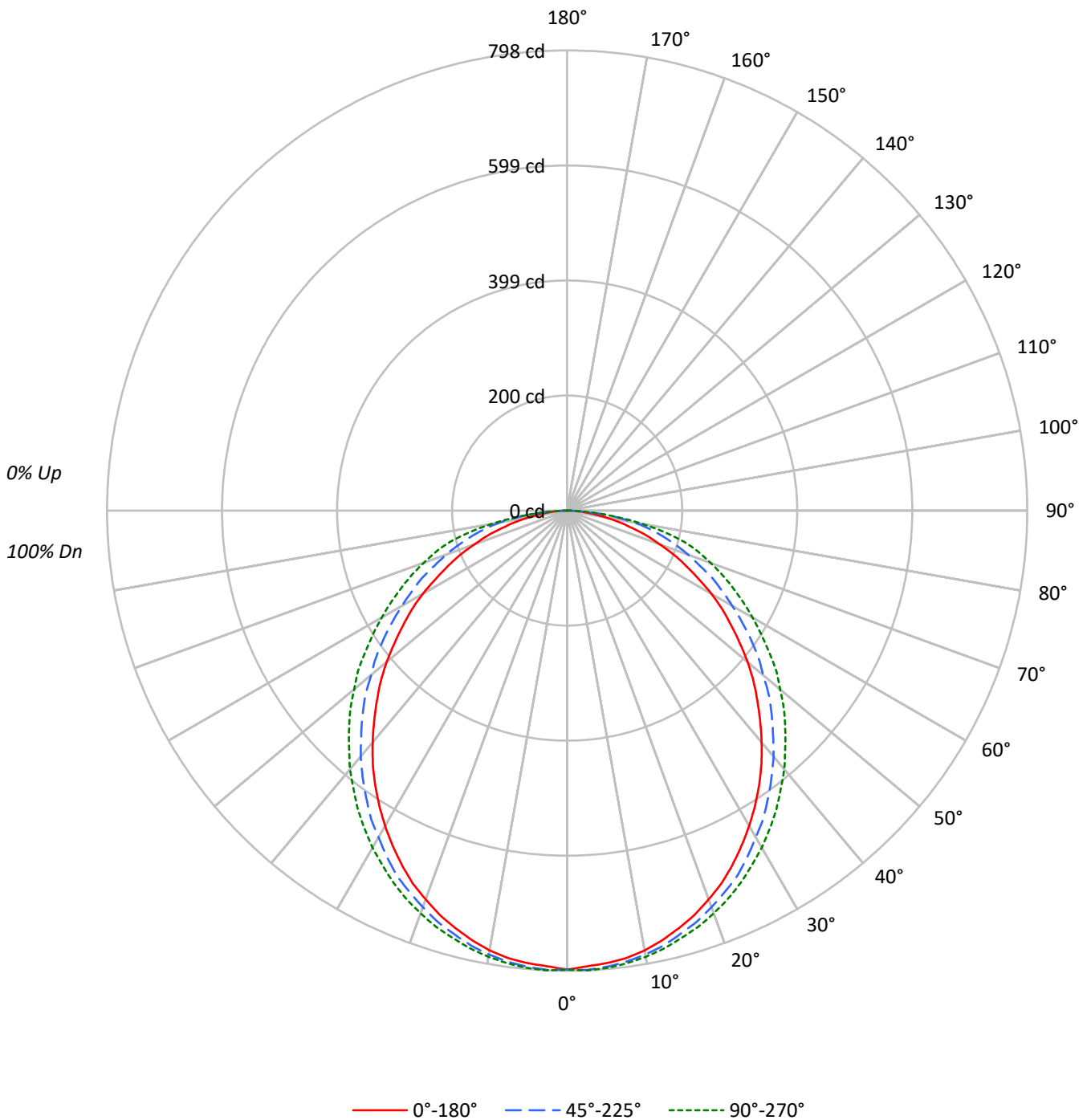
Input Watts (W): 17.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P389162

CATALOG NUMBER: 22CZ2-24VHE-S-UNV-L935-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P389162

CATALOG NUMBER: 22CZ2-24VHE-S-UNV-L935-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	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	2142	2142	2142
5°	2128	2145	2150
10°	2116	2136	2147
15°	2088	2117	2137
20°	2054	2096	2129
25°	2013	2075	2115
30°	1962	2032	2097
35°	1907	1996	2077
40°	1842	1956	2057
45°	1775	1909	2036
50°	1710	1858	2018
55°	1629	1824	2004
60°	1556	1780	1997
65°	1452	1769	2020
70°	1338	1754	2079
75°	1207	1778	2188
80°	1044	1832	2056
85°	865	1538	1538



TEST NUMBER: P389162

CATALOG NUMBER: 22CZ2-24VHE-S-UNV-L935-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.3	3.4
10°-20°	214.3	9.6
20°-30°	320.6	14.4
30°-40°	379.7	17.1
40°-50°	386.9	17.4
50°-60°	346.8	15.6
60°-70°	271.5	12.2
70°-80°	175.1	7.9
80°-90°	51.7	2.3
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°	610.1	27.5
0°-40°	989.8	44.5
0°-60°	1723.5	77.6
0°-90°	2221.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2221.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	796	796	796	796	796	
5°	788	790	794	795	796	75
15°	750	754	760	766	767	211
25°	678	684	699	708	712	312
35°	580	588	608	626	632	363
45°	466	477	502	528	535	360
55°	347	359	389	416	427	311
65°	228	242	278	305	317	227
75°	116	134	171	200	210	124
85°	28	38	50	50	50	33
90°	0	0	0	0	0	



TEST NUMBER: P389162

CATALOG NUMBER: 22CZ2-24VHE-S-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	796.1	796.1	796.1	796.1	796.1
2.5°	791.0	793.0	797.2	798.2	798.2
5°	787.8	789.9	794.1	795.1	796.1
7.5°	782.7	783.7	788.9	791.0	792.0
10°	774.4	776.4	781.6	784.7	785.8
12.5°	763.0	766.1	772.3	776.4	777.5
15°	749.5	753.6	759.9	766.1	767.1
17.5°	735.0	739.1	747.4	754.7	756.7
20°	717.4	722.5	731.9	740.2	743.3
22.5°	699.7	703.9	715.3	725.6	728.8
25°	678.0	684.2	698.7	708.0	712.2
27.5°	655.2	662.4	676.9	689.4	693.5
30°	631.3	638.6	654.1	669.7	674.9
32.5°	606.4	614.7	633.4	648.9	654.1
35°	580.5	587.8	607.5	626.1	632.4
37.5°	553.6	559.8	582.6	602.3	608.5
40°	524.5	532.8	556.7	579.5	585.7
42.5°	495.5	504.8	528.7	553.6	559.8
45°	466.5	476.9	501.7	527.7	534.9
47.5°	438.5	446.8	474.8	499.7	510.0
50°	408.4	416.7	443.7	471.7	482.0
52.5°	377.3	388.7	417.8	444.7	457.2
55°	347.3	358.7	388.7	415.7	427.1
57.5°	319.3	328.6	359.7	387.7	399.1
60°	289.2	297.5	330.7	360.8	371.1
62.5°	257.1	269.5	303.7	331.7	344.2
65°	228.1	241.5	277.8	304.8	317.2
67.5°	201.1	213.5	248.8	277.8	291.3
70°	170.0	186.6	222.9	251.9	264.3
72.5°	145.1	159.6	197.0	226.0	239.5
75°	116.1	133.7	171.0	200.1	210.4
77.5°	92.3	109.9	145.1	167.9	173.1
80°	67.4	85.0	118.2	129.6	132.7
82.5°	45.6	62.2	85.0	88.1	89.2
85°	28.0	38.4	49.8	49.8	49.8
87.5°	13.5	15.5	17.6	16.6	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)