

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: P389164

Luminaire Tested: **22CZ2-24VHE-S-UNV-L940-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: P389164  
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-L940-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2217.0 lumens  
Efficiency: N/A  
Efficacy: 126.7 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

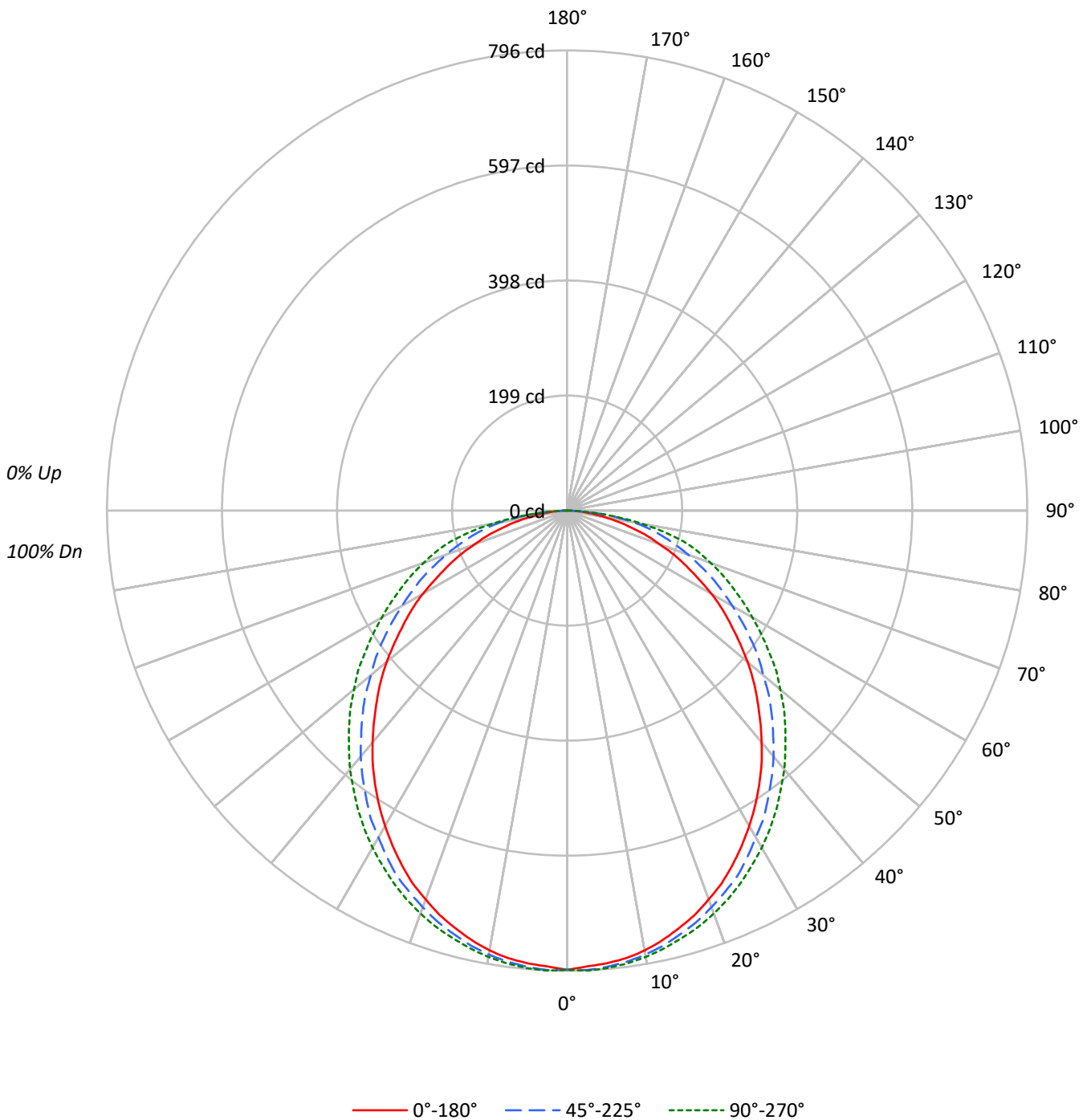
Input Watts (W): 17.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**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°	2138	2138	2138
5°	2123	2140	2146
10°	2111	2131	2143
15°	2084	2112	2133
20°	2050	2091	2124
25°	2009	2070	2110
30°	1958	2028	2092
35°	1903	1991	2073
40°	1839	1951	2053
45°	1772	1905	2031
50°	1706	1853	2014
55°	1626	1820	2000
60°	1553	1776	1993
65°	1449	1765	2015
70°	1334	1750	2076
75°	1205	1775	2183
80°	1041	1827	2052
85°	861	1535	1535



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.1	3.4
10°-20°	213.8	9.6
20°-30°	319.9	14.4
30°-40°	378.8	17.1
40°-50°	386.1	17.4
50°-60°	346.0	15.6
60°-70°	270.9	12.2
70°-80°	174.7	7.9
80°-90°	51.6	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°	608.8	27.5
0°-40°	987.7	44.5
0°-60°	1719.8	77.6
0°-90°	2217.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2217.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	794	794	794	794	794	
5°	786	788	792	793	794	75
15°	748	752	758	764	766	211
25°	676	683	697	706	711	311
35°	579	586	606	625	631	362
45°	466	476	501	526	534	359
55°	346	358	388	415	426	311
65°	228	241	277	304	316	226
75°	116	133	171	200	210	124
85°	28	38	50	50	50	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	794.4	794.4	794.4	794.4	794.4
2.5°	789.2	791.3	795.5	796.5	796.5
5°	786.1	788.2	792.4	793.4	794.4
7.5°	781.0	782.0	787.2	789.2	790.3
10°	772.7	774.8	779.9	783.0	784.1
12.5°	761.3	764.4	770.6	774.8	775.8
15°	747.9	752.0	758.2	764.4	765.5
17.5°	733.4	737.5	745.8	753.0	755.1
20°	715.8	721.0	730.3	738.6	741.7
22.5°	698.2	702.4	713.7	724.1	727.2
25°	676.5	682.7	697.2	706.5	710.6
27.5°	653.7	661.0	675.5	687.9	692.0
30°	630.0	637.2	652.7	668.2	673.4
32.5°	605.1	613.4	632.0	647.5	652.7
35°	579.3	586.5	606.2	624.8	631.0
37.5°	552.4	558.6	581.3	601.0	607.2
40°	523.4	531.7	555.5	578.2	584.4
42.5°	494.4	503.8	527.5	552.4	558.6
45°	465.5	475.8	500.7	526.5	533.8
47.5°	437.6	445.8	473.8	498.6	508.9
50°	407.6	415.8	442.7	470.7	481.0
52.5°	376.5	387.9	416.9	443.8	456.2
55°	346.5	357.9	387.9	414.8	426.2
57.5°	318.6	327.9	358.9	386.9	398.2
60°	288.6	296.9	330.0	360.0	370.3
62.5°	256.5	268.9	303.1	331.0	343.4
65°	227.6	241.0	277.2	304.1	316.5
67.5°	200.7	213.1	248.3	277.2	290.7
70°	169.6	186.2	222.4	251.4	263.8
72.5°	144.8	159.3	196.5	225.5	238.9
75°	115.9	133.4	170.7	199.6	210.0
77.5°	92.1	109.6	144.8	167.6	172.7
80°	67.2	84.8	117.9	129.3	132.4
82.5°	45.5	62.1	84.8	87.9	89.0
85°	27.9	38.3	49.7	49.7	49.7
87.5°	13.4	15.5	17.6	16.6	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)