

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: P389157

Luminaire Tested: **22CZ2-24VHE-S-UNV-L930-CD1-SDWPD1-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: P389157  
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-L930-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2115.5 lumens  
Efficiency: N/A  
Efficacy: 120.9 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

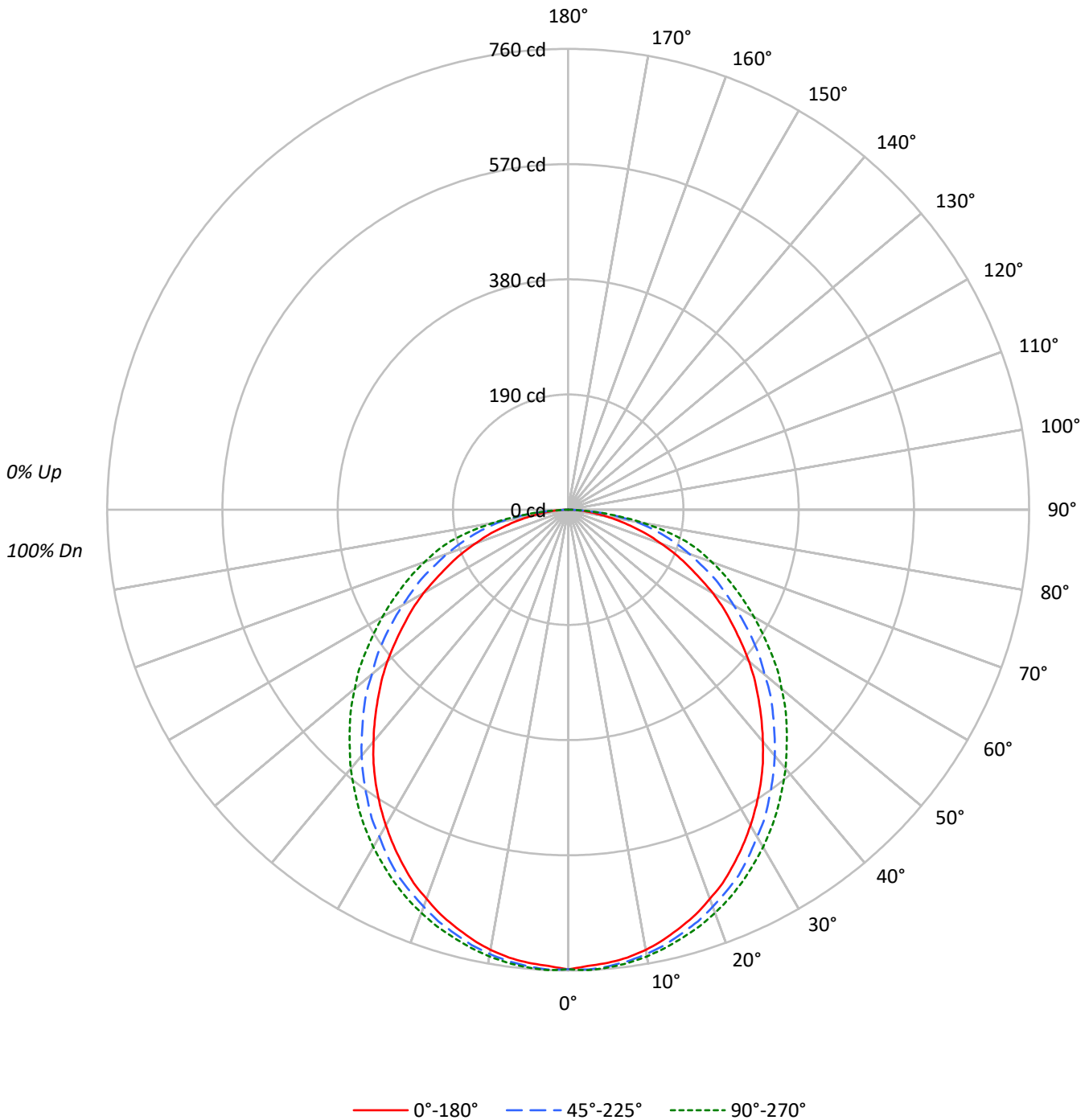
Input Watts (W): 17.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2040	2040	2040
5°	2026	2042	2048
10°	2015	2034	2044
15°	1988	2016	2035
20°	1956	1996	2027
25°	1917	1975	2013
30°	1868	1935	1997
35°	1816	1900	1978
40°	1754	1862	1959
45°	1690	1818	1938
50°	1628	1769	1922
55°	1552	1736	1908
60°	1482	1695	1902
65°	1382	1684	1923
70°	1274	1670	1980
75°	1149	1694	2084
80°	995	1743	1957
85°	824	1463	1463



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.7	3.4
10°-20°	204.0	9.6
20°-30°	305.2	14.4
30°-40°	361.5	17.1
40°-50°	368.4	17.4
50°-60°	330.2	15.6
60°-70°	258.5	12.2
70°-80°	166.7	7.9
80°-90°	49.2	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°	580.9	27.5
0°-40°	942.4	44.5
0°-60°	1641.0	77.6
0°-90°	2115.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2115.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	758	758	758	758	758	
5°	750	752	756	757	758	71
15°	714	718	724	729	730	201
25°	646	651	665	674	678	297
35°	553	560	578	596	602	345
45°	444	454	478	502	509	343
55°	331	342	370	396	407	296
65°	217	230	264	290	302	216
75°	110	127	163	190	200	119
85°	27	36	47	47	47	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	758.0	758.0	758.0	758.0	758.0
2.5°	753.1	755.1	759.0	760.0	760.0
5°	750.2	752.1	756.1	757.1	758.0
7.5°	745.2	746.2	751.1	753.1	754.1
10°	737.3	739.3	744.2	747.2	748.2
12.5°	726.5	729.4	735.3	739.3	740.3
15°	713.6	717.6	723.5	729.4	730.4
17.5°	699.8	703.8	711.7	718.6	720.5
20°	683.0	688.0	696.9	704.7	707.7
22.5°	666.3	670.2	681.1	690.9	693.9
25°	645.5	651.4	665.3	674.2	678.1
27.5°	623.8	630.7	644.5	656.4	660.3
30°	601.1	608.0	622.8	637.6	642.6
32.5°	577.4	585.3	603.1	617.9	622.8
35°	552.7	559.7	578.4	596.2	602.1
37.5°	527.1	533.0	554.7	573.5	579.4
40°	499.4	507.3	530.0	551.8	557.7
42.5°	471.8	480.7	503.4	527.1	533.0
45°	444.2	454.0	477.7	502.4	509.3
47.5°	417.5	425.4	452.1	475.8	485.6
50°	388.9	396.8	422.5	449.1	459.0
52.5°	359.3	370.1	397.8	423.4	435.3
55°	330.7	341.5	370.1	395.8	406.7
57.5°	304.0	312.9	342.5	369.2	380.0
60°	275.4	283.3	314.9	343.5	353.4
62.5°	244.8	256.6	289.2	315.9	327.7
65°	217.1	230.0	264.5	290.2	302.0
67.5°	191.5	203.3	236.9	264.5	277.4
70°	161.9	177.7	212.2	239.9	251.7
72.5°	138.2	152.0	187.5	215.2	228.0
75°	110.5	127.3	162.9	190.5	200.4
77.5°	87.8	104.6	138.2	159.9	164.8
80°	64.2	80.9	112.5	123.4	126.3
82.5°	43.4	59.2	80.9	83.9	84.9
85°	26.7	36.5	47.4	47.4	47.4
87.5°	12.8	14.8	16.8	15.8	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)