

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: P389139

Luminaire Tested: **22CZ2-20VHE-S-UNV-L940-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: P389139  
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: 22CZ2-20VHE-S-UNV-L940-CD1-SDWPD1-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: 1758.5 lumens  
Efficiency: N/A  
Efficacy: 123.8 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

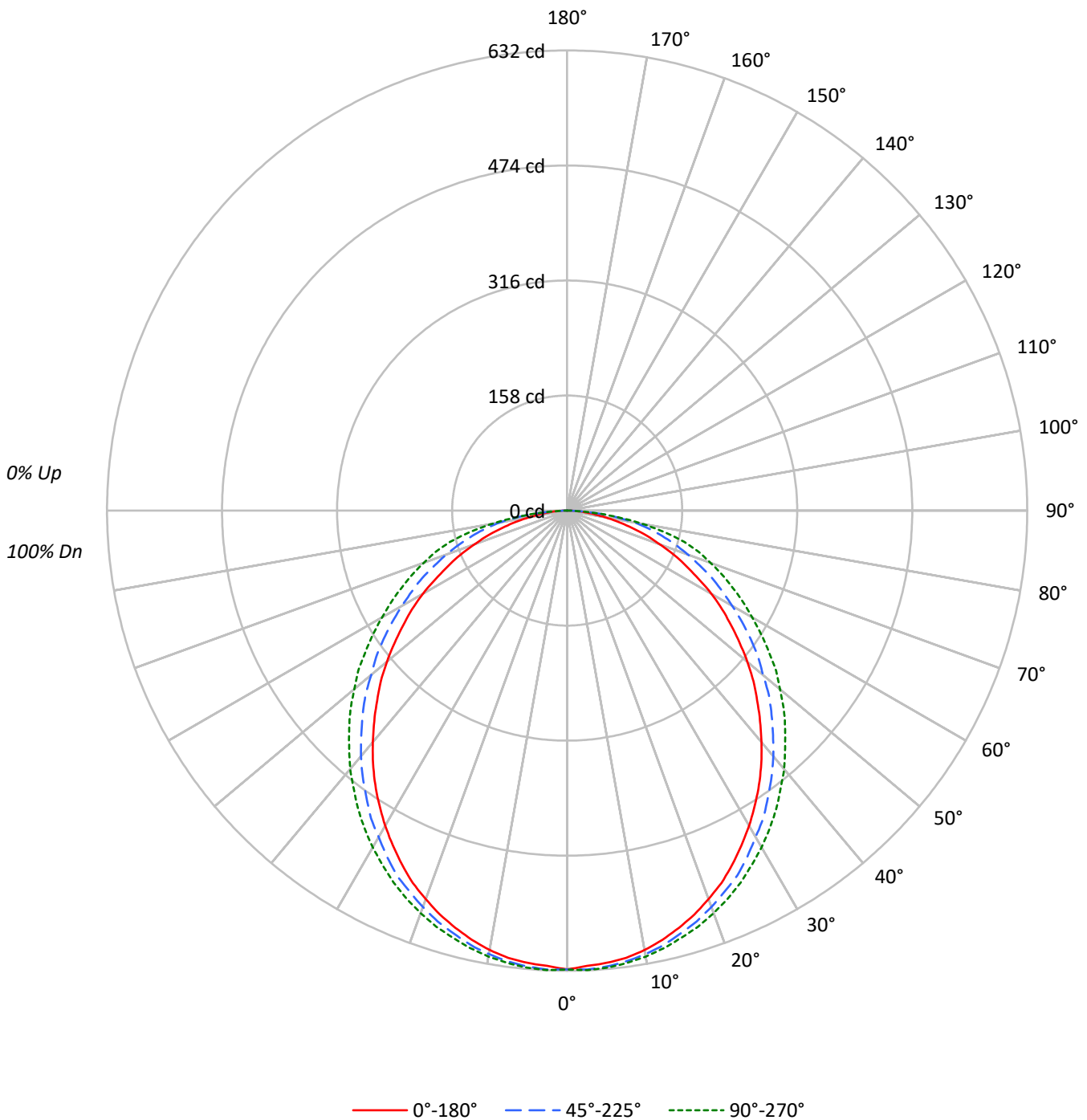
Input Watts (W): 14.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1696	1696	1696
5°	1685	1698	1702
10°	1675	1690	1699
15°	1653	1675	1692
20°	1626	1659	1685
25°	1593	1642	1674
30°	1553	1609	1660
35°	1509	1579	1644
40°	1459	1548	1629
45°	1405	1511	1611
50°	1353	1470	1597
55°	1290	1444	1586
60°	1232	1408	1581
65°	1149	1400	1599
70°	1059	1388	1646
75°	955	1408	1732
80°	826	1449	1627
85°	685	1216	1216



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.6	3.4
10°-20°	169.6	9.6
20°-30°	253.7	14.4
30°-40°	300.5	17.1
40°-50°	306.2	17.4
50°-60°	274.5	15.6
60°-70°	214.9	12.2
70°-80°	138.6	7.9
80°-90°	40.9	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°	482.9	27.5
0°-40°	783.4	44.5
0°-60°	1364.1	77.6
0°-90°	1758.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1758.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	630	630	630	630	630	
5°	624	625	628	629	630	59
15°	593	596	601	606	607	167
25°	537	542	553	560	564	247
35°	460	465	481	496	500	287
45°	369	377	397	418	423	285
55°	275	284	308	329	338	246
65°	180	191	220	241	251	179
75°	92	106	135	158	167	99
85°	22	30	39	39	39	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	630.1	630.1	630.1	630.1	630.1
2.5°	626.0	627.7	630.9	631.8	631.8
5°	623.6	625.2	628.5	629.3	630.1
7.5°	619.5	620.3	624.4	626.0	626.8
10°	612.9	614.5	618.6	621.1	621.9
12.5°	603.9	606.3	611.3	614.5	615.4
15°	593.2	596.5	601.4	606.3	607.2
17.5°	581.7	585.0	591.6	597.3	598.9
20°	567.8	571.9	579.3	585.8	588.3
22.5°	553.8	557.1	566.1	574.3	576.8
25°	536.6	541.5	553.0	560.4	563.7
27.5°	518.5	524.3	535.8	545.6	548.9
30°	499.7	505.4	517.7	530.0	534.1
32.5°	480.0	486.5	501.3	513.6	517.7
35°	459.5	465.2	480.8	495.6	500.5
37.5°	438.1	443.1	461.1	476.7	481.6
40°	415.2	421.7	440.6	458.6	463.6
42.5°	392.2	399.6	418.4	438.1	443.1
45°	369.2	377.4	397.1	417.6	423.4
47.5°	347.1	353.6	375.8	395.5	403.7
50°	323.3	329.8	351.2	373.3	381.5
52.5°	298.7	307.7	330.7	352.0	361.8
55°	274.9	283.9	307.7	329.0	338.0
57.5°	252.7	260.1	284.7	306.9	315.9
60°	228.9	235.5	261.7	285.5	293.7
62.5°	203.5	213.3	240.4	262.6	272.4
65°	180.5	191.2	219.9	241.2	251.1
67.5°	159.2	169.0	196.9	219.9	230.6
70°	134.6	147.7	176.4	199.4	209.2
72.5°	114.9	126.4	155.9	178.9	189.5
75°	91.9	105.8	135.4	158.4	166.6
77.5°	73.0	87.0	114.9	132.9	137.0
80°	53.3	67.3	93.5	102.6	105.0
82.5°	36.1	49.2	67.3	69.7	70.6
85°	22.2	30.4	39.4	39.4	39.4
87.5°	10.7	12.3	13.9	13.1	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)