

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: P389143

Luminaire Tested: **22CZ2-20VHE-S-UNV-L950-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: P389143  
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-L950-CD1-SWPD1-U  
Description: 2x2 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: 1889.3 lumens  
Efficiency: N/A  
Efficacy: 133.0 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

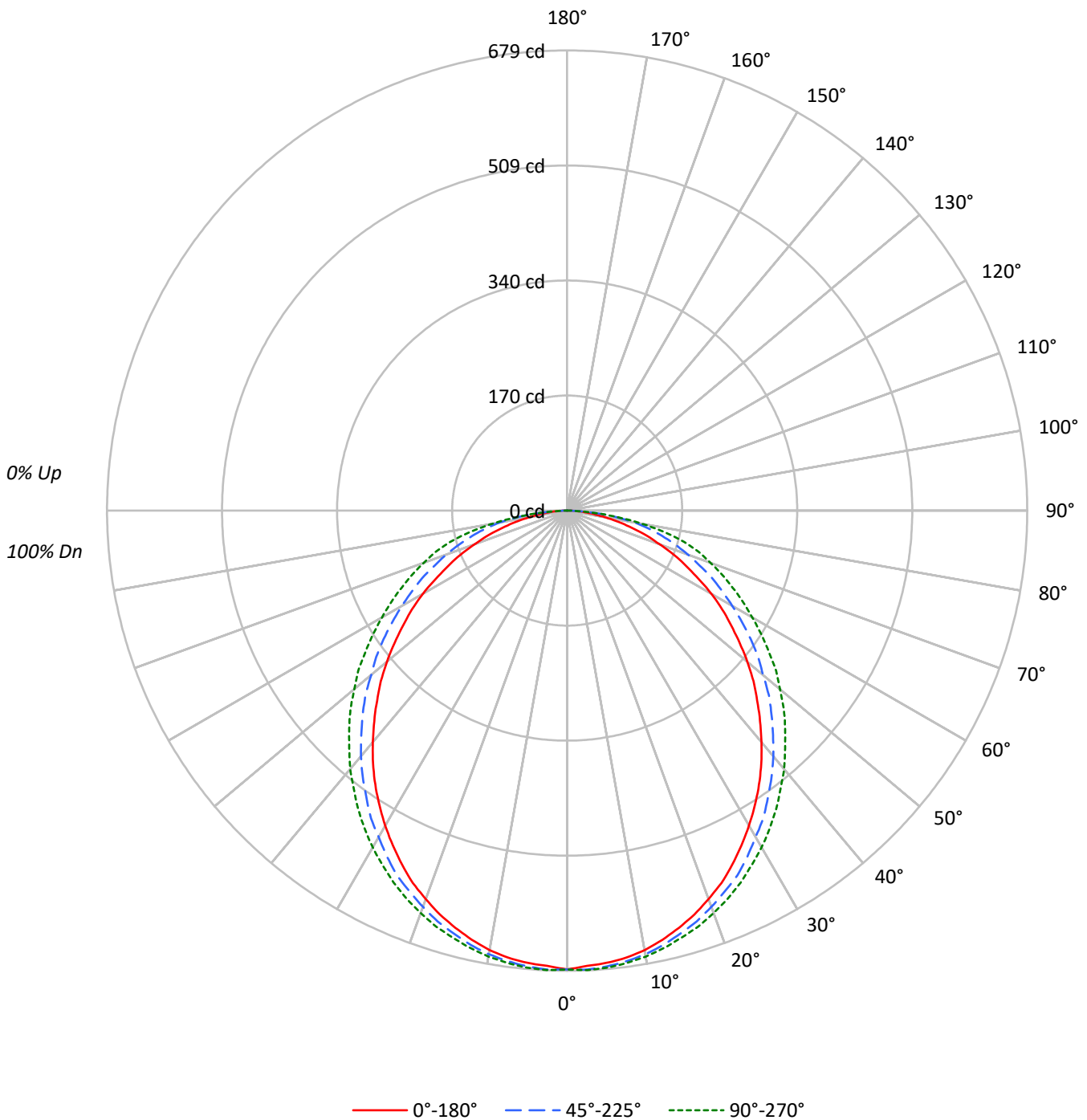
Input Watts (W): 14.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1822	1822	1822
5°	1810	1824	1829
10°	1799	1816	1826
15°	1775	1800	1817
20°	1747	1782	1810
25°	1712	1764	1798
30°	1668	1728	1783
35°	1622	1697	1766
40°	1567	1663	1749
45°	1510	1623	1731
50°	1454	1580	1716
55°	1385	1551	1704
60°	1323	1513	1699
65°	1235	1504	1717
70°	1138	1491	1769
75°	1026	1512	1860
80°	888	1557	1748
85°	735	1306	1306



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.0	3.4
10°-20°	182.2	9.6
20°-30°	272.6	14.4
30°-40°	322.8	17.1
40°-50°	329.0	17.4
50°-60°	294.9	15.6
60°-70°	230.9	12.2
70°-80°	148.9	7.9
80°-90°	44.0	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°	518.8	27.5
0°-40°	841.7	44.5
0°-60°	1465.6	77.6
0°-90°	1889.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1889.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	677	677	677	677	677	
5°	670	672	675	676	677	64
15°	637	641	646	651	652	180
25°	576	582	594	602	606	265
35°	494	500	517	532	538	309
45°	397	406	427	449	455	306
55°	295	305	331	354	363	265
65°	194	205	236	259	270	193
75°	99	114	145	170	179	106
85°	24	33	42	42	42	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	677.0	677.0	677.0	677.0	677.0
2.5°	672.6	674.4	677.9	678.8	678.8
5°	669.9	671.7	675.2	676.1	677.0
7.5°	665.5	666.4	670.8	672.6	673.5
10°	658.5	660.2	664.7	667.3	668.2
12.5°	648.8	651.4	656.7	660.2	661.1
15°	637.3	640.9	646.1	651.4	652.3
17.5°	625.0	628.5	635.6	641.7	643.5
20°	610.0	614.4	622.3	629.4	632.0
22.5°	595.0	598.5	608.2	617.1	619.7
25°	576.5	581.8	594.1	602.1	605.6
27.5°	557.1	563.3	575.6	586.2	589.7
30°	536.8	543.0	556.2	569.5	573.9
32.5°	515.7	522.7	538.6	551.8	556.2
35°	493.6	499.8	516.6	532.4	537.7
37.5°	470.7	476.0	495.4	512.2	517.4
40°	446.0	453.1	473.4	492.8	498.0
42.5°	421.4	429.3	449.6	470.7	476.0
45°	396.7	405.5	426.6	448.7	454.9
47.5°	372.9	379.9	403.7	424.9	433.7
50°	347.3	354.4	377.3	401.1	409.9
52.5°	320.9	330.6	355.2	378.2	388.7
55°	295.3	305.0	330.6	353.5	363.2
57.5°	271.5	279.4	305.9	329.7	339.4
60°	245.9	253.0	281.2	306.8	315.6
62.5°	218.6	229.2	258.3	282.1	292.7
65°	193.9	205.4	236.2	259.2	269.7
67.5°	171.0	181.6	211.6	236.2	247.7
70°	144.6	158.7	189.5	214.2	224.8
72.5°	123.4	135.8	167.5	192.2	203.6
75°	98.7	113.7	145.4	170.1	178.9
77.5°	78.5	93.4	123.4	142.8	147.2
80°	57.3	72.3	100.5	110.2	112.8
82.5°	38.8	52.9	72.3	74.9	75.8
85°	23.8	32.6	42.3	42.3	42.3
87.5°	11.5	13.2	15.0	14.1	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)