

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: P389190

Luminaire Tested: **22CZ2-29VHE-S-UNV-L950-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: P389190  
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: 22CZ2-29VHE-S-UNV-L950-CD1-SDWPD1-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: 2894.6 lumens  
Efficiency: N/A  
Efficacy: 133.4 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

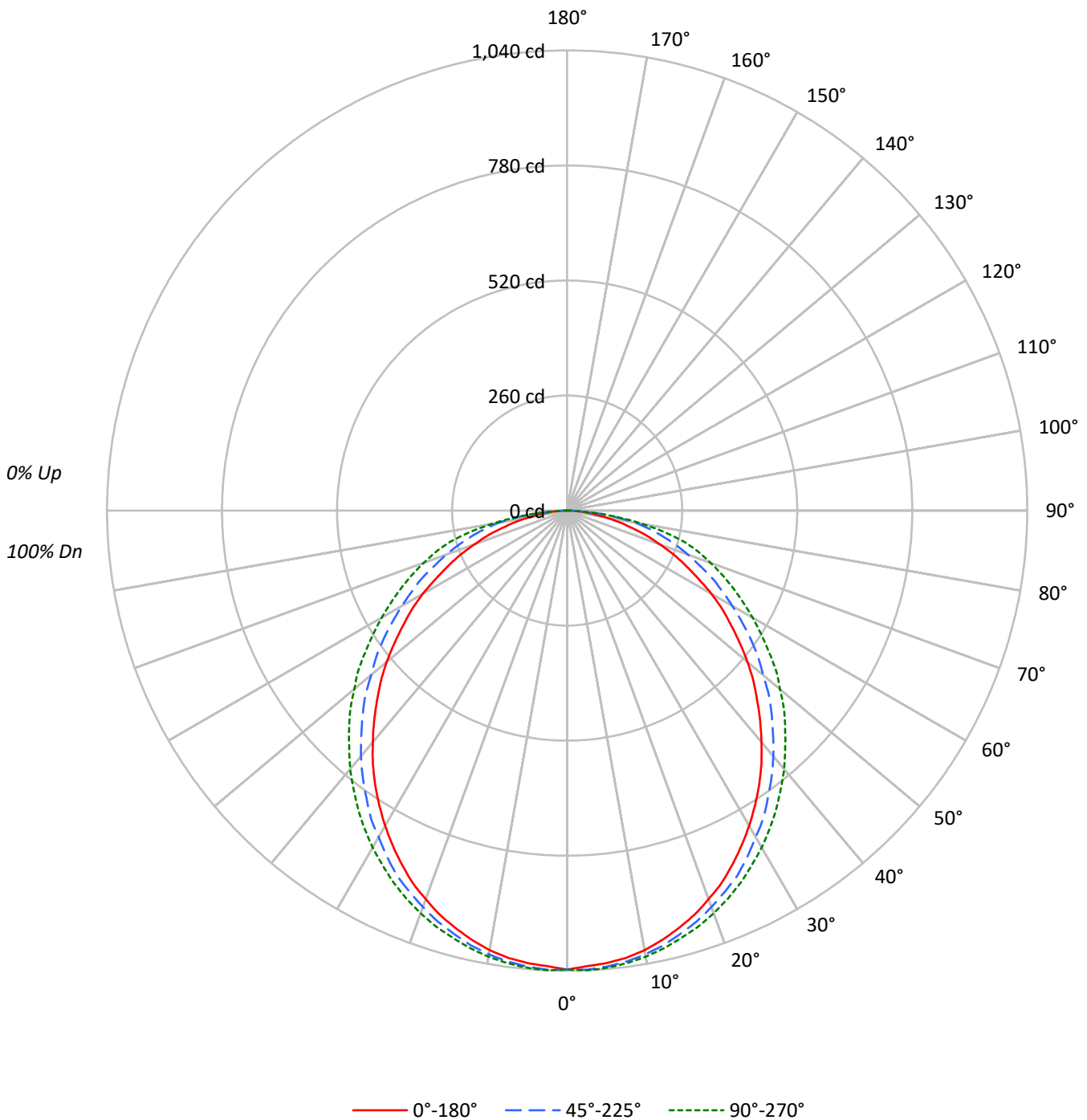
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2791	2791	2791
5°	2773	2794	2802
10°	2757	2782	2797
15°	2720	2758	2784
20°	2676	2731	2773
25°	2623	2703	2755
30°	2556	2648	2732
35°	2485	2600	2706
40°	2401	2547	2681
45°	2313	2488	2652
50°	2228	2420	2629
55°	2122	2376	2610
60°	2028	2319	2602
65°	1892	2304	2632
70°	1743	2285	2710
75°	1573	2316	2851
80°	1361	2386	2679
85°	1127	2001	2001



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.1	3.4
10°-20°	279.1	9.6
20°-30°	417.7	14.4
30°-40°	494.6	17.1
40°-50°	504.1	17.4
50°-60°	451.8	15.6
60°-70°	353.7	12.2
70°-80°	228.1	7.9
80°-90°	67.4	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°	794.9	27.5
0°-40°	1289.5	44.5
0°-60°	2245.4	77.6
0°-90°	2894.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2894.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1037	1037	1037	1037	1037	
5°	1026	1029	1034	1036	1037	97
15°	976	982	990	998	999	275
25°	883	891	910	922	928	407
35°	756	766	791	816	824	473
45°	608	621	654	687	697	469
55°	452	467	506	542	556	406
65°	297	315	362	397	413	295
75°	151	174	223	261	274	162
85°	36	50	65	65	65	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1037.2	1037.2	1037.2	1037.2	1037.2
2.5°	1030.5	1033.2	1038.6	1039.9	1039.9
5°	1026.4	1029.1	1034.5	1035.9	1037.2
7.5°	1019.7	1021.0	1027.8	1030.5	1031.8
10°	1008.9	1011.6	1018.3	1022.4	1023.7
12.5°	994.0	998.1	1006.2	1011.6	1012.9
15°	976.5	981.9	990.0	998.1	999.4
17.5°	957.5	962.9	973.7	983.2	985.9
20°	934.6	941.3	953.5	964.3	968.3
22.5°	911.6	917.0	931.9	945.4	949.4
25°	883.3	891.4	910.3	922.4	927.8
27.5°	853.6	863.0	881.9	898.1	903.5
30°	822.5	831.9	852.2	872.5	879.2
32.5°	790.1	800.9	825.2	845.4	852.2
35°	756.3	765.8	791.4	815.7	823.8
37.5°	721.2	729.3	759.0	784.7	792.8
40°	683.4	694.2	725.2	755.0	763.1
42.5°	645.6	657.7	688.8	721.2	729.3
45°	607.7	621.3	653.7	687.4	696.9
47.5°	571.3	582.1	618.6	651.0	664.5
50°	532.1	542.9	578.0	614.5	628.0
52.5°	491.6	506.5	544.3	579.4	595.6
55°	452.4	467.3	506.5	541.6	556.4
57.5°	416.0	428.1	468.6	505.1	520.0
60°	376.8	387.6	430.8	470.0	483.5
62.5°	334.9	351.1	395.7	432.2	448.4
65°	297.1	314.7	361.9	397.1	413.3
67.5°	262.0	278.2	324.1	361.9	379.5
70°	221.5	243.1	290.4	328.2	344.4
72.5°	189.1	208.0	256.6	294.4	312.0
75°	151.3	174.2	222.8	260.7	274.2
77.5°	120.2	143.2	189.1	218.8	225.5
80°	87.8	110.7	154.0	168.8	172.9
82.5°	59.4	81.0	110.7	114.8	116.1
85°	36.5	50.0	64.8	64.8	64.8
87.5°	17.6	20.3	23.0	21.6	21.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)