

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: P390222

Luminaire Tested: **22CZ2-29VHE-HRP-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: P390222  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-29VHE-HRP-UNV-L950-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2338.4 lumens  
Efficiency: N/A  
Efficacy: 107.8 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

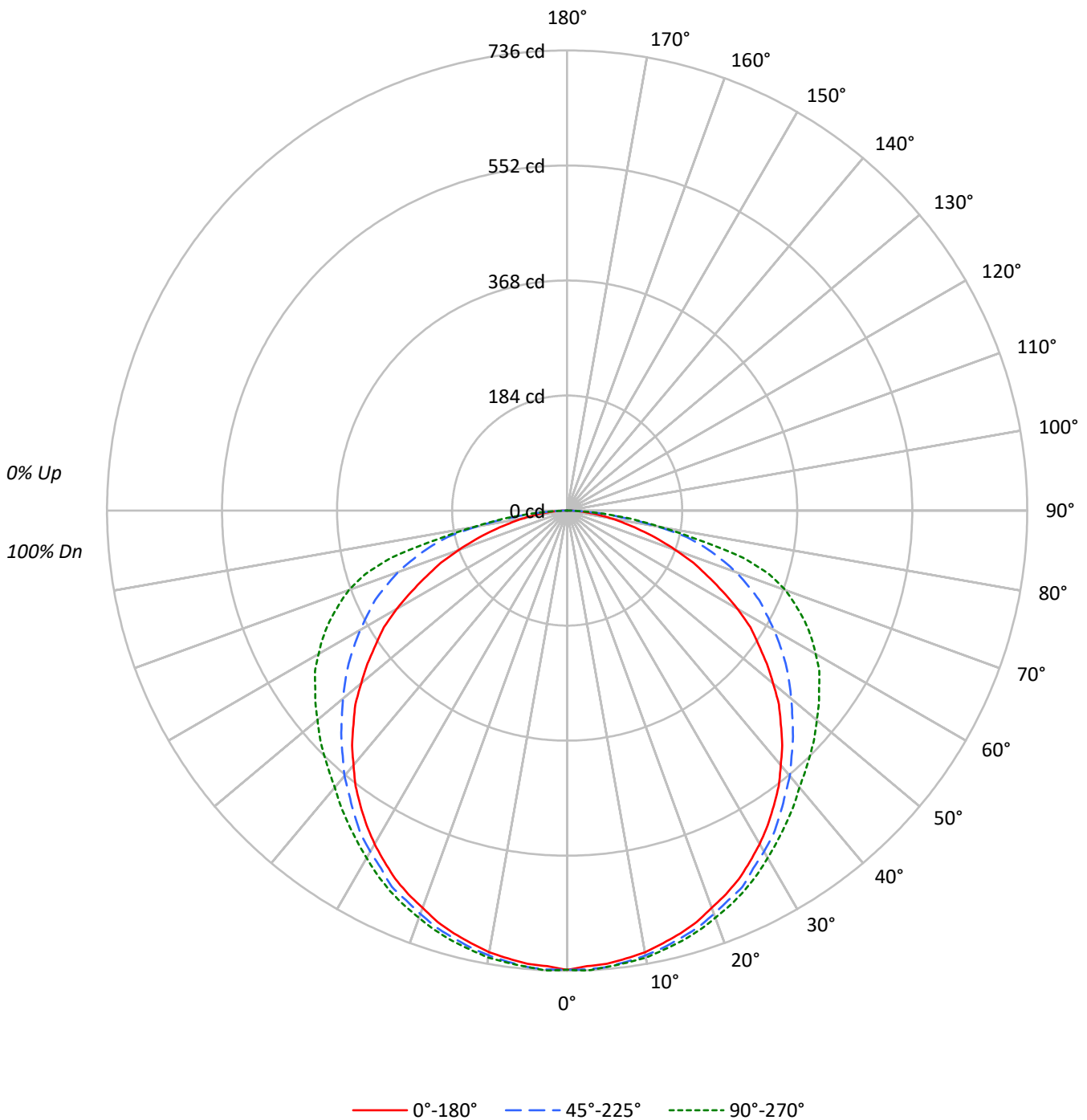
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1977	1977	1977
5°	1966	1979	1979
10°	1960	1974	1984
15°	1950	1970	1984
20°	1936	1966	1985
25°	1931	1972	1992
30°	1913	1956	1994
35°	1893	1950	2006
40°	1867	1946	2030
45°	1840	1944	2095
50°	1801	1959	2182
55°	1751	2001	2308
60°	1694	2055	2472
65°	1577	2158	2672
70°	1448	2260	2924
75°	1269	2379	3022
80°	1093	2266	2373
85°	957	1646	1806



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.5	3.0
10°-20°	199.5	8.5
20°-30°	304.4	13.0
30°-40°	371.6	15.9
40°-50°	397.4	17.0
50°-60°	383.6	16.4
60°-70°	330.2	14.1
70°-80°	223.4	9.6
80°-90°	58.9	2.5
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°	573.3	24.5
0°-40°	945.0	40.4
0°-60°	1725.9	73.8
0°-90°	2338.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2338.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	734	734	734	734	734	
5°	728	729	733	733	733	69
15°	700	702	707	710	712	198
25°	650	654	664	667	671	299
35°	576	581	594	606	611	361
45°	483	492	511	537	550	373
55°	373	385	427	470	492	335
65°	248	272	339	392	420	246
75°	122	162	229	275	291	131
85°	31	43	53	55	58	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	734.5	734.5	734.5	734.5	734.5
2.5°	729.4	731.1	734.5	734.5	736.3
5°	727.7	729.4	732.8	732.8	732.8
7.5°	722.5	724.2	727.7	729.4	729.4
10°	717.3	719.1	722.5	724.2	725.9
12.5°	708.7	710.4	715.6	719.1	719.1
15°	700.1	701.8	707.0	710.4	712.2
17.5°	689.8	693.2	698.4	701.8	703.6
20°	676.0	679.5	686.4	691.5	693.2
22.5°	664.0	667.4	674.3	679.5	682.9
25°	650.2	653.7	664.0	667.4	670.9
27.5°	633.0	636.5	645.1	652.0	657.1
30°	615.8	619.3	629.6	638.2	641.6
32.5°	596.9	602.1	614.1	621.0	626.2
35°	576.3	581.4	593.5	605.5	610.7
37.5°	555.6	560.8	572.8	588.3	595.2
40°	531.5	538.4	553.9	574.6	578.0
42.5°	509.2	517.8	531.5	555.6	564.2
45°	483.4	492.0	510.9	536.7	550.5
47.5°	459.3	467.9	488.5	519.5	536.7
50°	430.1	442.1	467.9	504.0	521.2
52.5°	402.5	412.9	447.3	486.8	507.5
55°	373.3	385.3	426.6	469.6	492.0
57.5°	347.5	357.8	404.3	452.4	478.2
60°	314.8	328.6	381.9	433.5	459.3
62.5°	280.4	301.0	359.5	412.9	440.4
65°	247.7	271.8	338.9	392.2	419.7
67.5°	218.5	244.3	313.1	369.8	395.6
70°	184.1	216.7	287.3	342.3	371.6
72.5°	153.1	189.2	258.0	313.1	338.9
75°	122.1	161.7	228.8	275.2	290.7
77.5°	94.6	132.5	196.1	209.9	211.6
80°	70.5	104.9	146.2	147.9	153.1
82.5°	48.2	74.0	94.6	103.2	104.9
85°	31.0	43.0	53.3	55.0	58.5
87.5°	13.8	15.5	18.9	17.2	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)