

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: P390341

Luminaire Tested: **22CZ2-39VHE-RDP-UNV-L940-CD1-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: P390341  
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: 22CZ2-39VHE-RDP-UNV-L940-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2342.9 lumens  
Efficiency: N/A  
Efficacy: 81.9 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

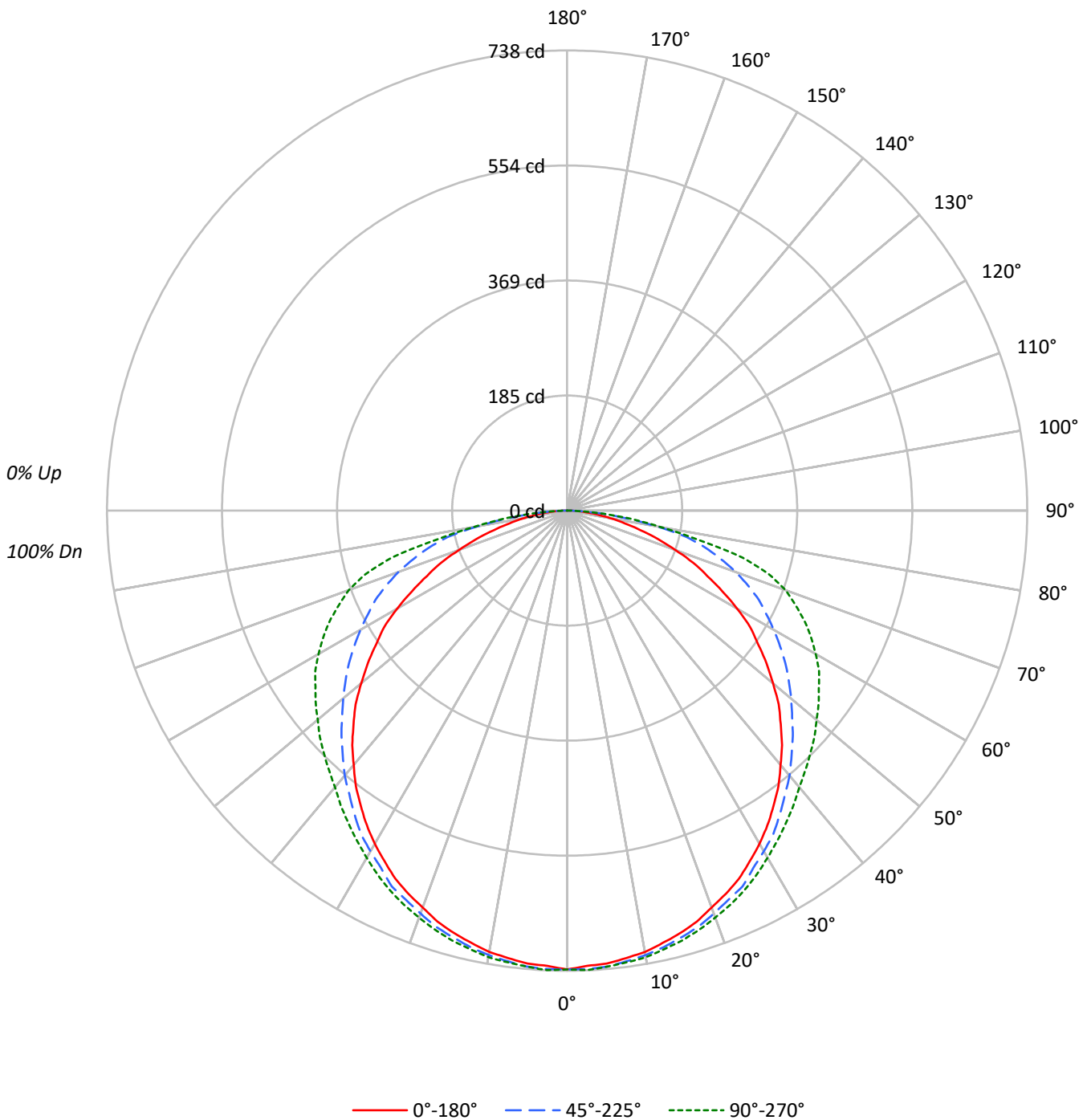
Input Watts (W): 28.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1980	1980	1980
5°	1969	1983	1983
10°	1964	1978	1987
15°	1954	1974	1988
20°	1940	1969	1989
25°	1934	1975	1996
30°	1917	1960	1998
35°	1897	1953	2010
40°	1871	1950	2034
45°	1843	1948	2099
50°	1804	1963	2186
55°	1755	2005	2312
60°	1697	2059	2477
65°	1580	2162	2677
70°	1451	2264	2929
75°	1273	2383	3029
80°	1096	2270	2377
85°	957	1649	1809



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.6	3.0
10°-20°	199.9	8.5
20°-30°	305.0	13.0
30°-40°	372.4	15.9
40°-50°	398.1	17.0
50°-60°	384.3	16.4
60°-70°	330.8	14.1
70°-80°	223.8	9.6
80°-90°	59.1	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°	574.4	24.5
0°-40°	946.8	40.4
0°-60°	1729.2	73.8
0°-90°	2342.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2342.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	736	736	736	736	736	
5°	729	731	734	734	734	69
15°	702	703	708	712	714	198
25°	652	655	665	669	672	300
35°	577	583	595	607	612	361
45°	484	493	512	538	552	374
55°	374	386	427	470	493	335
65°	248	272	340	393	420	247
75°	122	162	229	276	291	131
85°	31	43	53	55	59	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	735.9	735.9	735.9	735.9	735.9
2.5°	730.8	732.5	735.9	735.9	737.7
5°	729.1	730.8	734.2	734.2	734.2
7.5°	723.9	725.6	729.1	730.8	730.8
10°	718.7	720.4	723.9	725.6	727.3
12.5°	710.1	711.8	717.0	720.4	720.4
15°	701.5	703.2	708.4	711.8	713.5
17.5°	691.1	694.6	699.8	703.2	704.9
20°	677.3	680.8	687.7	692.9	694.6
22.5°	665.3	668.7	675.6	680.8	684.2
25°	651.5	654.9	665.3	668.7	672.2
27.5°	634.3	637.7	646.3	653.2	658.4
30°	617.0	620.5	630.8	639.4	642.9
32.5°	598.1	603.2	615.3	622.2	627.4
35°	577.4	582.6	594.6	606.7	611.9
37.5°	556.7	561.9	573.9	589.4	596.3
40°	532.6	539.5	555.0	575.7	579.1
42.5°	510.2	518.8	532.6	556.7	565.3
45°	484.3	492.9	511.9	537.7	551.5
47.5°	460.2	468.8	489.5	520.5	537.7
50°	430.9	442.9	468.8	505.0	522.2
52.5°	403.3	413.6	448.1	487.8	508.4
55°	374.0	386.1	427.4	470.5	492.9
57.5°	348.2	358.5	405.0	453.3	479.1
60°	315.4	329.2	382.6	434.3	460.2
62.5°	280.9	301.6	360.2	413.6	441.2
65°	248.2	272.3	339.5	393.0	420.5
67.5°	218.9	244.7	313.7	370.6	396.4
70°	184.4	217.2	287.8	343.0	372.3
72.5°	153.4	189.6	258.5	313.7	339.5
75°	122.4	162.0	229.2	275.8	291.3
77.5°	94.8	132.7	196.5	210.3	212.0
80°	70.7	105.1	146.5	148.2	153.4
82.5°	48.3	74.1	94.8	103.4	105.1
85°	31.0	43.1	53.4	55.2	58.6
87.5°	13.8	15.5	19.0	17.2	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)