

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: P390314

Luminaire Tested: **22CZ2-39VHE-HRP-UNV-L935-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: P390314  
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-HRP-UNV-L935-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2926.7 lumens  
Efficiency: N/A  
Efficacy: 102.3 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

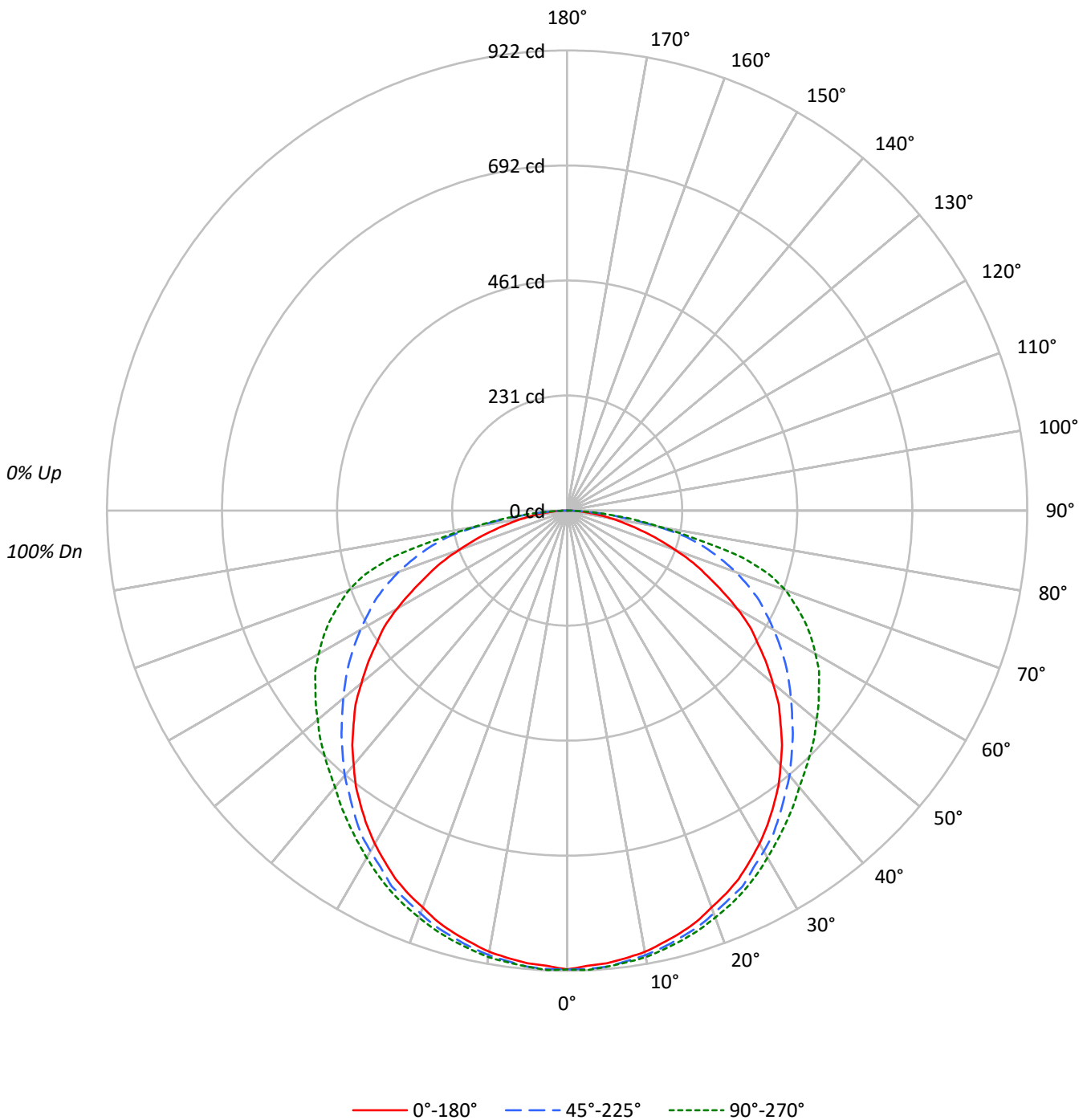
Input Watts (W): 28.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20			20				20			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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82	82	
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67	67	
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55	55	
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47	47	
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40	40	
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35	35	
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31	31	
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27	27	
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24	24	
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22	22	

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

	0°	45°	90°
0°	2474	2474	2474
5°	2460	2478	2478
10°	2453	2471	2483
15°	2441	2465	2483
20°	2423	2460	2485
25°	2416	2468	2493
30°	2395	2449	2495
35°	2370	2440	2511
40°	2337	2435	2541
45°	2302	2433	2622
50°	2253	2452	2731
55°	2192	2505	2889
60°	2120	2573	3094
65°	1974	2700	3345
70°	1813	2829	3659
75°	1590	2977	3784
80°	1368	2836	2969
85°	1198	2059	2260



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.0	3.0
10°-20°	249.7	8.5
20°-30°	380.9	13.0
30°-40°	465.1	15.9
40°-50°	497.3	17.0
50°-60°	480.0	16.4
60°-70°	413.2	14.1
70°-80°	279.6	9.6
80°-90°	73.8	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°	717.6	24.5
0°-40°	1182.7	40.4
0°-60°	2160.1	73.8
0°-90°	2926.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2926.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	919	919	919	919	919	
5°	911	913	917	917	917	86
15°	876	878	885	889	891	247
25°	814	818	831	835	840	375
35°	721	728	743	758	764	451
45°	605	616	639	672	689	467
55°	467	482	534	588	616	419
65°	310	340	424	491	525	308
75°	153	202	286	344	364	164
85°	39	54	67	69	73	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	919.3	919.3	919.3	919.3	919.3
2.5°	912.9	915.0	919.3	919.3	921.5
5°	910.7	912.9	917.2	917.2	917.2
7.5°	904.3	906.4	910.7	912.9	912.9
10°	897.8	900.0	904.3	906.4	908.6
12.5°	887.0	889.2	895.6	900.0	900.0
15°	876.3	878.4	884.9	889.2	891.3
17.5°	863.3	867.7	874.1	878.4	880.6
20°	846.1	850.4	859.0	865.5	867.7
22.5°	831.1	835.4	844.0	850.4	854.7
25°	813.8	818.1	831.1	835.4	839.7
27.5°	792.3	796.6	807.4	816.0	822.4
30°	770.8	775.1	788.0	798.8	803.1
32.5°	747.1	753.5	768.6	777.2	783.7
35°	721.3	727.7	742.8	757.9	764.3
37.5°	695.4	701.9	716.9	736.3	744.9
40°	665.3	673.9	693.3	719.1	723.4
42.5°	637.3	648.1	665.3	695.4	706.2
45°	605.0	615.8	639.4	671.7	689.0
47.5°	574.8	585.6	611.4	650.2	671.7
50°	538.2	553.3	585.6	630.8	652.4
52.5°	503.8	516.7	559.8	609.3	635.1
55°	467.2	482.3	533.9	587.8	615.8
57.5°	434.9	447.8	506.0	566.2	598.5
60°	394.0	411.2	478.0	542.6	574.8
62.5°	350.9	376.8	450.0	516.7	551.2
65°	310.0	340.2	424.1	490.9	525.3
67.5°	273.4	305.7	391.8	462.9	495.2
70°	230.4	271.3	359.5	428.4	465.0
72.5°	191.6	236.8	322.9	391.8	424.1
75°	152.9	202.4	286.3	344.5	363.9
77.5°	118.4	165.8	245.4	262.7	264.8
80°	88.3	131.3	183.0	185.2	191.6
82.5°	60.3	92.6	118.4	129.2	131.3
85°	38.8	53.8	66.7	68.9	73.2
87.5°	17.2	19.4	23.7	21.5	21.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)