

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: P389186

Luminaire Tested: **22CZ2-29VHE-S-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: P389186  
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-L935-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2766.4 lumens  
Efficiency: N/A  
Efficacy: 127.5 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

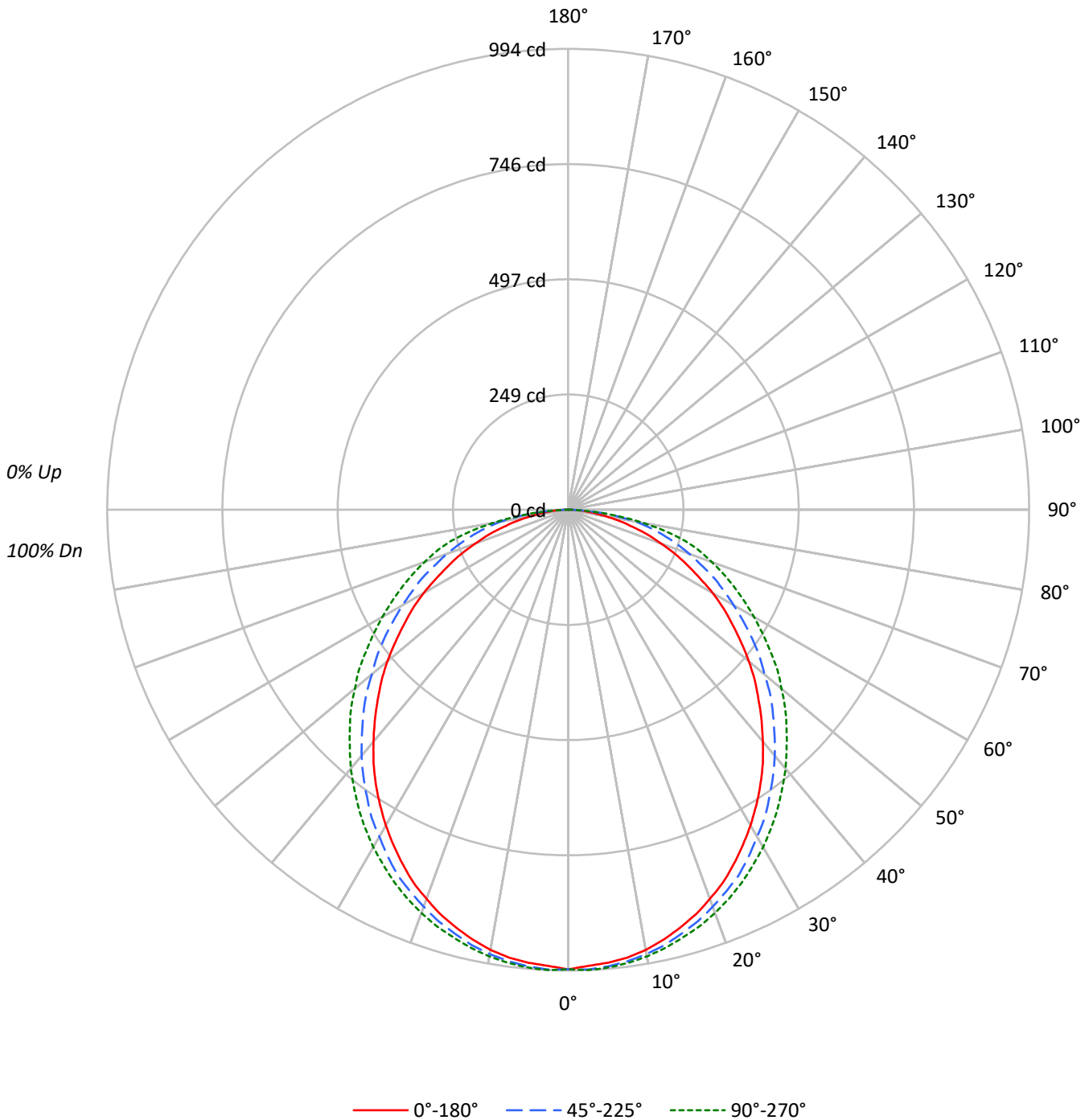
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49					49			
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43					43			
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37					37			
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33					33			
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30					30			
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27					27			
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24					24			

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

	0°	45°	90°
0°	2668	2668	2668
5°	2650	2671	2678
10°	2635	2659	2673
15°	2600	2636	2661
20°	2558	2610	2650
25°	2506	2583	2633
30°	2443	2531	2611
35°	2374	2485	2587
40°	2294	2435	2562
45°	2210	2377	2535
50°	2129	2313	2513
55°	2029	2271	2495
60°	1938	2216	2487
65°	1808	2202	2515
70°	1666	2183	2589
75°	1503	2215	2724
80°	1300	2280	2560
85°	1074	1914	1914



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.7	3.4
10°-20°	266.8	9.6
20°-30°	399.2	14.4
30°-40°	472.7	17.1
40°-50°	481.8	17.4
50°-60°	431.8	15.6
60°-70°	338.0	12.2
70°-80°	218.0	7.9
80°-90°	64.4	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°	759.7	27.5
0°-40°	1232.4	44.5
0°-60°	2146.0	77.6
0°-90°	2766.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2766.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	991	991	991	991	991	
5°	981	984	989	990	991	93
15°	933	938	946	954	955	263
25°	844	852	870	882	887	389
35°	723	732	756	780	787	452
45°	581	594	625	657	666	449
55°	432	447	484	518	532	388
65°	284	301	346	380	395	282
75°	145	166	213	249	262	155
85°	35	48	62	62	62	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	991.3	991.3	991.3	991.3	991.3
2.5°	984.8	987.4	992.6	993.9	993.9
5°	981.0	983.5	988.7	990.0	991.3
7.5°	974.5	975.8	982.3	984.8	986.1
10°	964.2	966.8	973.2	977.1	978.4
12.5°	950.0	953.9	961.6	966.8	968.1
15°	933.2	938.4	946.1	953.9	955.1
17.5°	915.1	920.3	930.6	939.7	942.2
20°	893.2	899.6	911.3	921.6	925.5
22.5°	871.2	876.4	890.6	903.5	907.4
25°	844.1	851.9	870.0	881.6	886.7
27.5°	815.7	824.8	842.9	858.3	863.5
30°	786.1	795.1	814.5	833.8	840.3
32.5°	755.1	765.4	788.6	808.0	814.5
35°	722.8	731.8	756.4	779.6	787.4
37.5°	689.3	697.0	725.4	749.9	757.7
40°	653.1	663.4	693.1	721.5	729.3
42.5°	617.0	628.6	658.3	689.3	697.0
45°	580.8	593.7	624.7	657.0	666.0
47.5°	546.0	556.3	591.2	622.1	635.0
50°	508.6	518.9	552.4	587.3	600.2
52.5°	469.8	484.0	520.2	553.7	569.2
55°	432.4	446.6	484.0	517.6	531.8
57.5°	397.5	409.2	447.9	482.7	496.9
60°	360.1	370.4	411.7	449.2	462.1
62.5°	320.1	335.6	378.2	413.0	428.5
65°	284.0	300.7	345.9	379.5	395.0
67.5°	250.4	265.9	309.8	345.9	362.7
70°	211.7	232.3	277.5	313.6	329.1
72.5°	180.7	198.8	245.2	281.4	298.2
75°	144.6	166.5	213.0	249.1	262.0
77.5°	114.9	136.8	180.7	209.1	215.6
80°	83.9	105.8	147.1	161.3	165.2
82.5°	56.8	77.4	105.8	109.7	111.0
85°	34.8	47.8	62.0	62.0	62.0
87.5°	16.8	19.4	21.9	20.7	20.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)