

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: P387820

Luminaire Tested: **22CZ2-29VHE-SQR-UNV-L935-CD1-SWPD1-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: P387820  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-29VHE-SQR-UNV-L935-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2497.1 lumens  
Efficiency: N/A  
Efficacy: 115.1 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

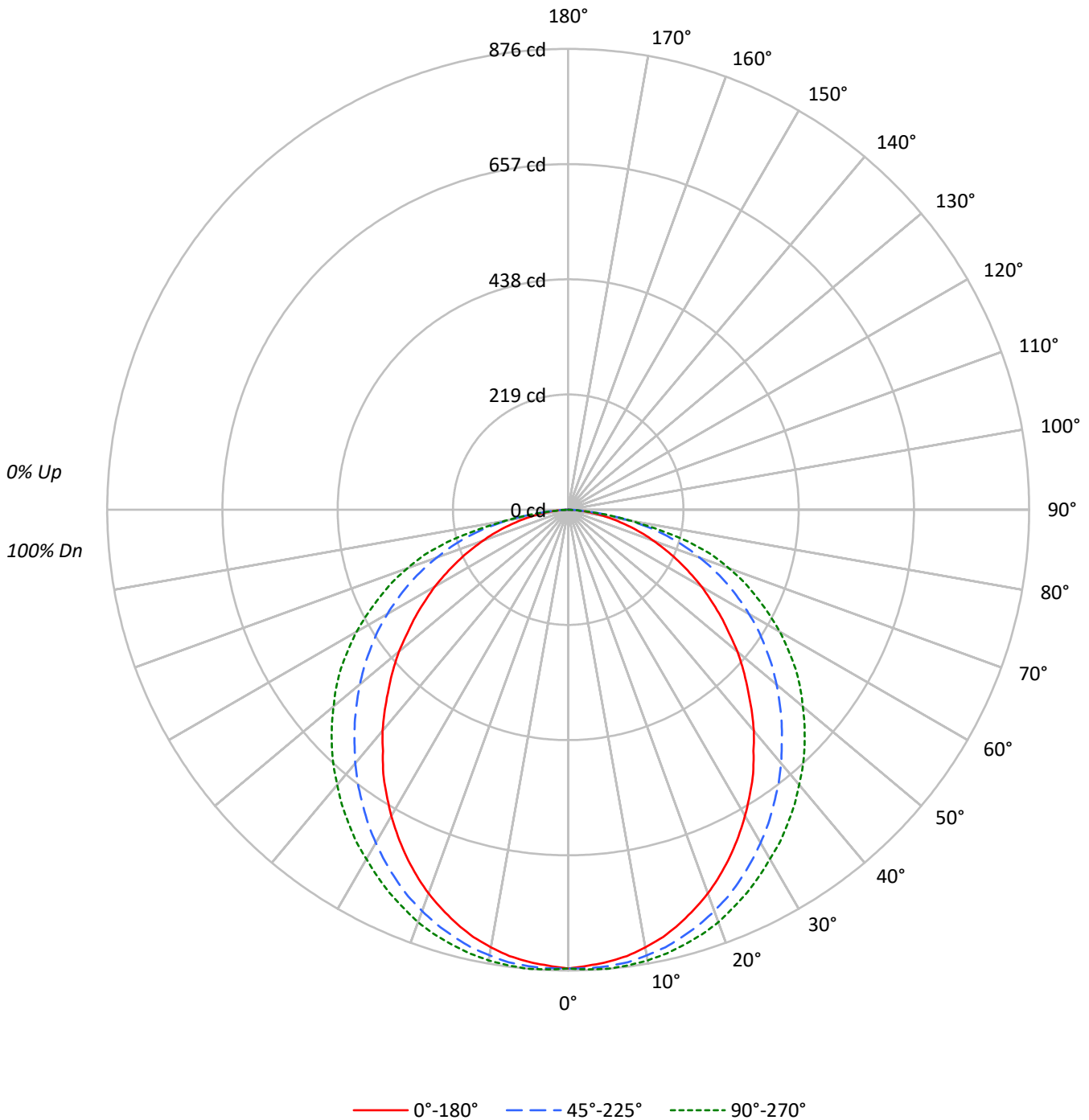
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	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	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	2347	2347	2347
5°	2331	2353	2366
10°	2309	2351	2377
15°	2272	2341	2384
20°	2223	2325	2389
25°	2161	2301	2386
30°	2088	2272	2383
35°	2013	2239	2391
40°	1927	2211	2398
45°	1836	2183	2418
50°	1757	2163	2436
55°	1663	2146	2474
60°	1575	2137	2500
65°	1472	2120	2521
70°	1352	2089	2555
75°	1220	2034	2464
80°	1048	1799	1855
85°	843	1062	843



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.7	3.3
10°-20°	236.4	9.5
20°-30°	355.1	14.2
30°-40°	423.5	17.0
40°-50°	437.9	17.5
50°-60°	402.6	16.1
60°-70°	320.5	12.8
70°-80°	195.8	7.8
80°-90°	42.6	1.7
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°	674.2	27.0
0°-40°	1097.8	44.0
0°-60°	1938.2	77.6
0°-90°	2497.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2497.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	872	872	872	872	872	
5°	863	865	871	875	876	82
15°	815	825	840	852	856	230
25°	728	746	775	796	804	335
35°	613	639	682	717	728	382
45°	482	517	574	620	635	373
55°	354	394	458	510	527	317
65°	231	270	333	379	396	229
75°	117	152	196	230	237	125
85°	27	33	34	30	27	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	872.3	872.3	872.3	872.3	872.3
2.5°	867.6	868.7	872.3	874.7	874.7
5°	862.8	865.2	871.1	874.7	875.9
7.5°	855.7	859.3	867.6	872.3	873.5
10°	845.0	849.8	860.4	867.6	869.9
12.5°	832.0	839.1	852.1	861.6	864.0
15°	815.4	824.9	840.3	852.1	855.7
17.5°	796.4	808.3	827.3	841.5	846.2
20°	776.3	788.1	811.9	828.4	834.4
22.5°	752.6	768.0	795.3	814.2	819.0
25°	727.7	745.5	775.1	796.4	803.6
27.5°	700.4	721.8	753.8	779.9	785.8
30°	672.0	694.5	731.3	759.7	766.8
32.5°	642.4	668.4	707.6	739.6	749.0
35°	612.7	638.8	681.5	717.0	727.7
37.5°	578.4	609.2	656.6	693.3	706.4
40°	548.7	578.4	629.3	669.6	682.7
42.5°	515.6	547.6	600.9	644.7	660.1
45°	482.4	516.7	573.6	619.9	635.3
47.5°	451.6	485.9	545.2	593.8	609.2
50°	419.6	455.1	516.7	566.5	581.9
52.5°	385.2	424.3	488.3	538.1	555.9
55°	354.4	393.5	457.5	509.6	527.4
57.5°	322.4	362.7	429.0	478.8	495.4
60°	292.7	331.9	397.0	445.6	464.6
62.5°	260.7	301.0	365.0	412.4	430.2
65°	231.1	270.2	333.0	379.3	395.9
67.5°	201.5	240.6	299.9	343.7	362.7
70°	171.9	211.0	265.5	308.1	324.7
72.5°	145.8	180.1	232.3	271.4	286.8
75°	117.3	151.7	195.6	229.9	237.0
77.5°	91.3	122.1	158.8	174.2	176.6
80°	67.6	91.3	116.1	119.7	119.7
82.5°	45.0	62.8	72.3	73.5	72.3
85°	27.3	33.2	34.4	29.6	27.3
87.5°	9.5	9.5	5.9	3.6	1.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)