

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: P389423

Luminaire Tested: **22CZ2-80VHE-S-UNV-L930-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: P389423  
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: 22CZ2-80VHE-S-UNV-L930-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7015.2 lumens  
Efficiency: N/A  
Efficacy: 118.7 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

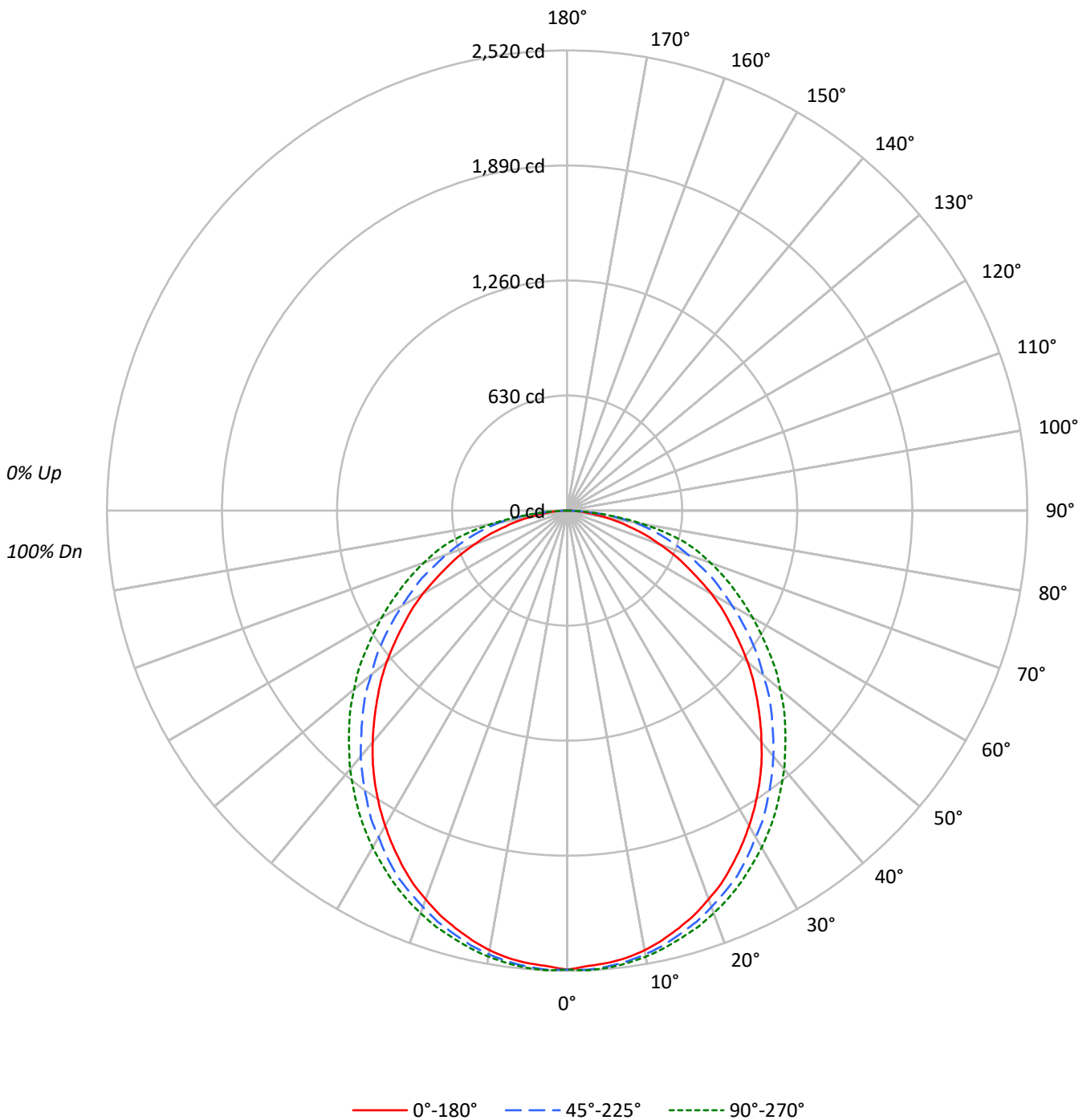
Input Watts (W): 59.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	6765	6765	6765
5°	6720	6773	6790
10°	6681	6744	6779
15°	6593	6684	6748
20°	6486	6617	6720
25°	6356	6550	6676
30°	6194	6417	6621
35°	6022	6301	6559
40°	5818	6174	6496
45°	5605	6029	6427
50°	5399	5865	6372
55°	5144	5758	6327
60°	4915	5619	6307
65°	4585	5585	6378
70°	4223	5537	6567
75°	3812	5615	6908
80°	3298	5782	6493
85°	2729	4851	4851



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	237.7	3.4
10°-20°	676.5	9.6
20°-30°	1012.2	14.4
30°-40°	1198.8	17.1
40°-50°	1221.7	17.4
50°-60°	1095.0	15.6
60°-70°	857.3	12.2
70°-80°	552.8	7.9
80°-90°	163.3	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°	1926.5	27.5
0°-40°	3125.2	44.5
0°-60°	5441.8	77.6
0°-90°	7015.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7015.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2514	2514	2514	2514	2514	
5°	2488	2494	2507	2510	2514	236
15°	2366	2380	2399	2419	2422	667
25°	2141	2160	2206	2236	2249	985
35°	1833	1856	1918	1977	1997	1146
45°	1473	1506	1584	1666	1689	1137
55°	1096	1132	1227	1312	1348	983
65°	720	763	877	962	1002	715
75°	367	422	540	632	664	393
85°	88	121	157	157	157	104
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2513.8	2513.8	2513.8	2513.8	2513.8
2.5°	2497.4	2503.9	2517.0	2520.3	2520.3
5°	2487.6	2494.1	2507.2	2510.5	2513.8
7.5°	2471.2	2474.5	2490.9	2497.4	2500.7
10°	2445.0	2451.6	2467.9	2477.8	2481.0
12.5°	2409.0	2418.8	2438.5	2451.6	2454.8
15°	2366.5	2379.6	2399.2	2418.8	2422.1
17.5°	2320.7	2333.7	2359.9	2382.8	2389.4
20°	2265.0	2281.4	2310.8	2337.0	2346.8
22.5°	2209.4	2222.5	2258.5	2291.2	2301.0
25°	2140.6	2160.3	2206.1	2235.5	2248.6
27.5°	2068.6	2091.5	2137.4	2176.6	2189.7
30°	1993.3	2016.2	2065.3	2114.4	2130.8
32.5°	1914.8	1941.0	1999.9	2049.0	2065.3
35°	1833.0	1855.9	1918.1	1977.0	1996.6
37.5°	1747.9	1767.5	1839.5	1901.7	1921.3
40°	1656.2	1682.4	1757.7	1829.7	1849.3
42.5°	1564.6	1594.0	1669.3	1747.9	1767.5
45°	1472.9	1505.6	1584.2	1666.0	1688.9
47.5°	1384.5	1410.7	1499.1	1577.6	1610.4
50°	1289.6	1315.8	1400.9	1489.3	1522.0
52.5°	1191.4	1227.4	1319.1	1404.2	1443.5
55°	1096.5	1132.5	1227.4	1312.5	1348.5
57.5°	1008.1	1037.6	1135.8	1224.2	1260.2
60°	913.2	939.4	1044.1	1139.0	1171.8
62.5°	811.7	851.0	959.0	1047.4	1086.7
65°	720.1	762.6	877.2	962.3	1001.6
67.5°	635.0	674.3	785.6	877.2	919.7
70°	536.8	589.2	703.7	795.4	834.6
72.5°	458.2	504.1	621.9	713.5	756.1
75°	366.6	422.2	540.1	631.7	664.4
77.5°	291.3	347.0	458.2	530.2	546.6
80°	212.8	268.4	373.1	409.1	419.0
82.5°	144.0	196.4	268.4	278.2	281.5
85°	88.4	121.1	157.1	157.1	157.1
87.5°	42.6	49.1	55.6	52.4	52.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)