

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: P389422

Luminaire Tested: **22CZ2-80VHE-S-UNV-L930-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: P389422  
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-SWPD1-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: 6928.2 lumens  
Efficiency: N/A  
Efficacy: 117.2 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

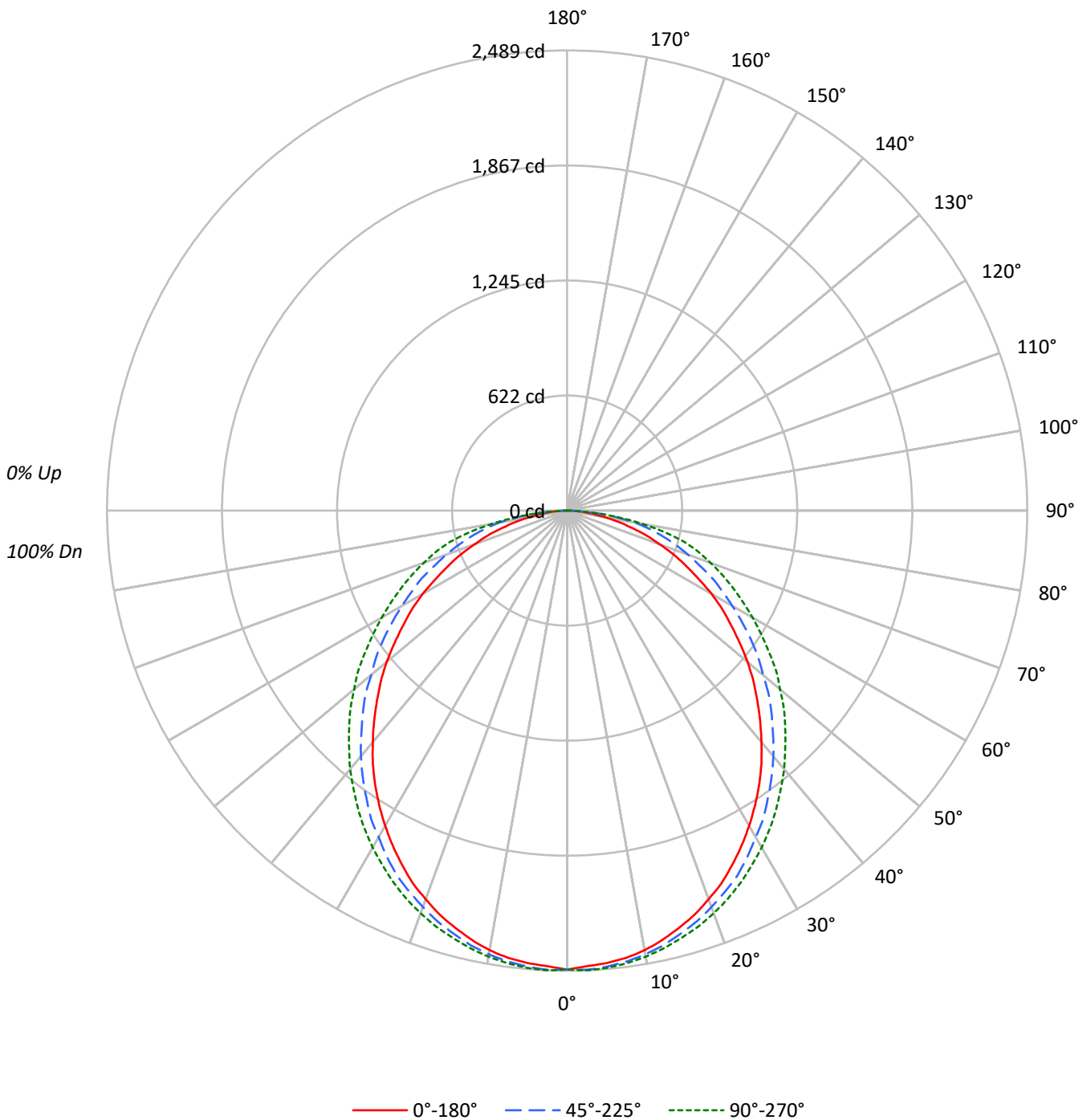
Input Watts (W): 59.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	6681	6681	6681
5°	6636	6689	6706
10°	6598	6660	6695
15°	6511	6601	6664
20°	6406	6535	6637
25°	6277	6469	6594
30°	6117	6338	6539
35°	5947	6223	6478
40°	5746	6098	6416
45°	5536	5954	6348
50°	5332	5792	6293
55°	5081	5687	6248
60°	4854	5550	6228
65°	4528	5516	6299
70°	4171	5468	6486
75°	3764	5546	6823
80°	3256	5711	6413
85°	2695	4792	4792



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	234.8	3.4
10°-20°	668.1	9.6
20°-30°	999.7	14.4
30°-40°	1183.9	17.1
40°-50°	1206.5	17.4
50°-60°	1081.4	15.6
60°-70°	846.6	12.2
70°-80°	545.9	7.9
80°-90°	161.3	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°	1902.6	27.5
0°-40°	3086.5	44.5
0°-60°	5374.4	77.6
0°-90°	6928.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6928.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2483	2483	2483	2483	2483	
5°	2457	2463	2476	2479	2483	233
15°	2337	2350	2370	2389	2392	659
25°	2114	2134	2179	2208	2221	973
35°	1810	1833	1894	1952	1972	1131
45°	1455	1487	1564	1645	1668	1123
55°	1083	1118	1212	1296	1332	971
65°	711	753	866	950	989	706
75°	362	417	533	624	656	388
85°	87	120	155	155	155	102
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2482.6	2482.6	2482.6	2482.6	2482.6
2.5°	2466.4	2472.9	2485.8	2489.1	2489.1
5°	2456.7	2463.2	2476.1	2479.4	2482.6
7.5°	2440.6	2443.8	2460.0	2466.4	2469.7
10°	2414.7	2421.2	2437.3	2447.0	2450.3
12.5°	2379.1	2388.8	2408.2	2421.2	2424.4
15°	2337.1	2350.1	2369.5	2388.8	2392.1
17.5°	2291.9	2304.8	2330.7	2353.3	2359.8
20°	2236.9	2253.1	2282.2	2308.0	2317.7
22.5°	2182.0	2194.9	2230.5	2262.8	2272.5
25°	2114.1	2133.5	2178.7	2207.8	2220.8
27.5°	2043.0	2065.6	2110.8	2149.6	2162.6
30°	1968.6	1991.2	2039.7	2088.2	2104.4
32.5°	1891.0	1916.9	1975.1	2023.6	2039.7
35°	1810.2	1832.8	1894.3	1952.5	1971.8
37.5°	1726.2	1745.6	1816.7	1878.1	1897.5
40°	1635.7	1661.5	1735.9	1807.0	1826.4
42.5°	1545.2	1574.2	1648.6	1726.2	1745.6
45°	1454.6	1487.0	1564.5	1645.4	1668.0
47.5°	1367.4	1393.2	1480.5	1558.1	1590.4
50°	1273.6	1299.5	1383.5	1470.8	1503.1
52.5°	1176.6	1212.2	1302.7	1386.8	1425.5
55°	1082.9	1118.5	1212.2	1296.2	1331.8
57.5°	995.6	1024.7	1121.7	1209.0	1244.5
60°	901.9	927.7	1031.2	1124.9	1157.2
62.5°	801.7	840.5	947.1	1034.4	1073.2
65°	711.2	753.2	866.3	950.4	989.2
67.5°	627.1	665.9	775.8	866.3	908.3
70°	530.1	581.9	695.0	785.5	824.3
72.5°	452.6	497.8	614.2	704.7	746.7
75°	362.0	417.0	533.4	623.9	656.2
77.5°	287.7	342.6	452.6	523.7	539.8
80°	210.1	265.1	368.5	404.1	413.8
82.5°	142.2	194.0	265.1	274.8	278.0
85°	87.3	119.6	155.2	155.2	155.2
87.5°	42.0	48.5	55.0	51.7	51.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)