

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: P389373

Luminaire Tested: **22CZ2-70VHE-S-UNV-L930-CD1-SDWPD1-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: P389373  
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: 22CZ2-70VHE-S-UNV-L930-CD1-SDWPD1-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: 5935.3 lumens  
Efficiency: N/A  
Efficacy: 118.0 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

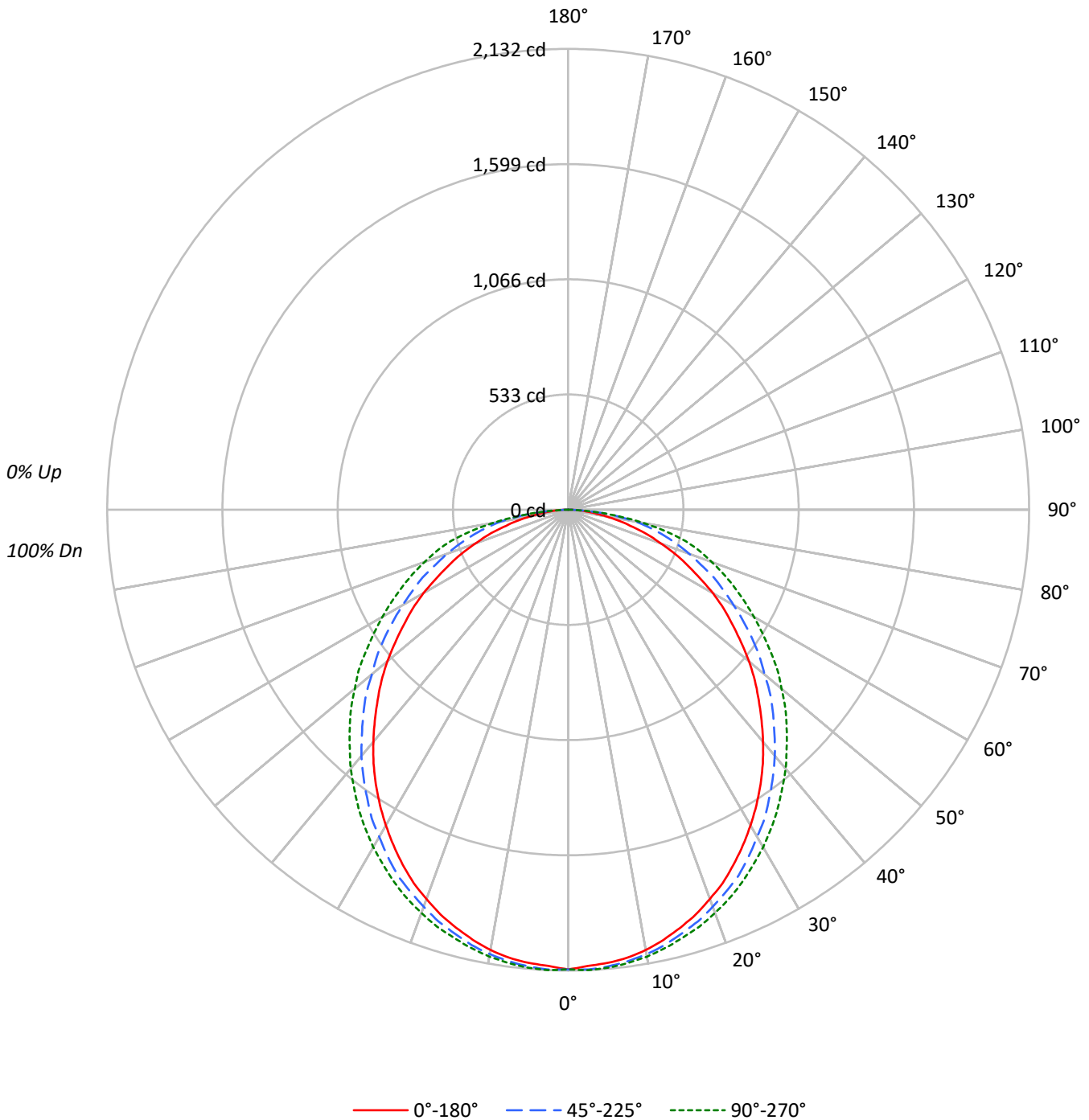
Input Watts (W): 50.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5723	5723	5723
5°	5685	5730	5745
10°	5652	5705	5736
15°	5578	5655	5709
20°	5488	5599	5686
25°	5377	5542	5649
30°	5240	5430	5602
35°	5094	5331	5549
40°	4923	5224	5496
45°	4743	5101	5438
50°	4568	4962	5391
55°	4352	4872	5353
60°	4158	4754	5336
65°	3879	4726	5396
70°	3574	4685	5556
75°	3225	4750	5845
80°	2789	4892	5494
85°	2309	4103	4103



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	201.1	3.4
10°-20°	572.4	9.6
20°-30°	856.4	14.4
30°-40°	1014.2	17.1
40°-50°	1033.6	17.4
50°-60°	926.4	15.6
60°-70°	725.3	12.2
70°-80°	467.7	7.9
80°-90°	138.2	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°	1629.9	27.5
0°-40°	2644.1	44.5
0°-60°	4604.1	77.6
0°-90°	5935.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5935.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2127	2127	2127	2127	2127	
5°	2105	2110	2121	2124	2127	200
15°	2002	2013	2030	2046	2049	564
25°	1811	1828	1866	1891	1902	834
35°	1551	1570	1623	1673	1689	969
45°	1246	1274	1340	1410	1429	962
55°	928	958	1038	1110	1141	832
65°	609	645	742	814	847	605
75°	310	357	457	534	562	333
85°	75	102	133	133	133	88
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2126.8	2126.8	2126.8	2126.8	2126.8
2.5°	2113.0	2118.5	2129.6	2132.3	2132.3
5°	2104.6	2110.2	2121.3	2124.0	2126.8
7.5°	2090.8	2093.6	2107.4	2113.0	2115.7
10°	2068.6	2074.2	2088.0	2096.3	2099.1
12.5°	2038.2	2046.5	2063.1	2074.2	2077.0
15°	2002.2	2013.3	2029.9	2046.5	2049.3
17.5°	1963.4	1974.5	1996.6	2016.0	2021.6
20°	1916.3	1930.2	1955.1	1977.3	1985.6
22.5°	1869.3	1880.3	1910.8	1938.5	1946.8
25°	1811.1	1827.7	1866.5	1891.4	1902.5
27.5°	1750.2	1769.6	1808.3	1841.6	1852.6
30°	1686.5	1705.9	1747.4	1789.0	1802.8
32.5°	1620.0	1642.2	1692.0	1733.6	1747.4
35°	1550.8	1570.2	1622.8	1672.6	1689.3
37.5°	1478.8	1495.4	1556.3	1608.9	1625.6
40°	1401.3	1423.4	1487.1	1548.0	1564.6
42.5°	1323.7	1348.6	1412.3	1478.8	1495.4
45°	1246.2	1273.9	1340.3	1409.6	1428.9
47.5°	1171.4	1193.6	1268.3	1334.8	1362.5
50°	1091.1	1113.2	1185.2	1260.0	1287.7
52.5°	1008.0	1038.5	1116.0	1188.0	1221.3
55°	927.7	958.2	1038.5	1110.5	1140.9
57.5°	852.9	877.9	960.9	1035.7	1066.2
60°	772.6	794.8	883.4	963.7	991.4
62.5°	686.8	720.0	811.4	886.2	919.4
65°	609.2	645.2	742.2	814.2	847.4
67.5°	537.2	570.5	664.6	742.2	778.2
70°	454.2	498.5	595.4	672.9	706.2
72.5°	387.7	426.5	526.2	603.7	639.7
75°	310.2	357.2	456.9	534.5	562.2
77.5°	246.5	293.5	387.7	448.6	462.5
80°	180.0	227.1	315.7	346.2	354.5
82.5°	121.8	166.2	227.1	235.4	238.2
85°	74.8	102.5	132.9	132.9	132.9
87.5°	36.0	41.5	47.1	44.3	44.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)