

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: P389380

Luminaire Tested: **22CZ2-70VHE-S-UNV-L940-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: P389380  
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-L940-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6220.1 lumens  
Efficiency: N/A  
Efficacy: 123.7 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

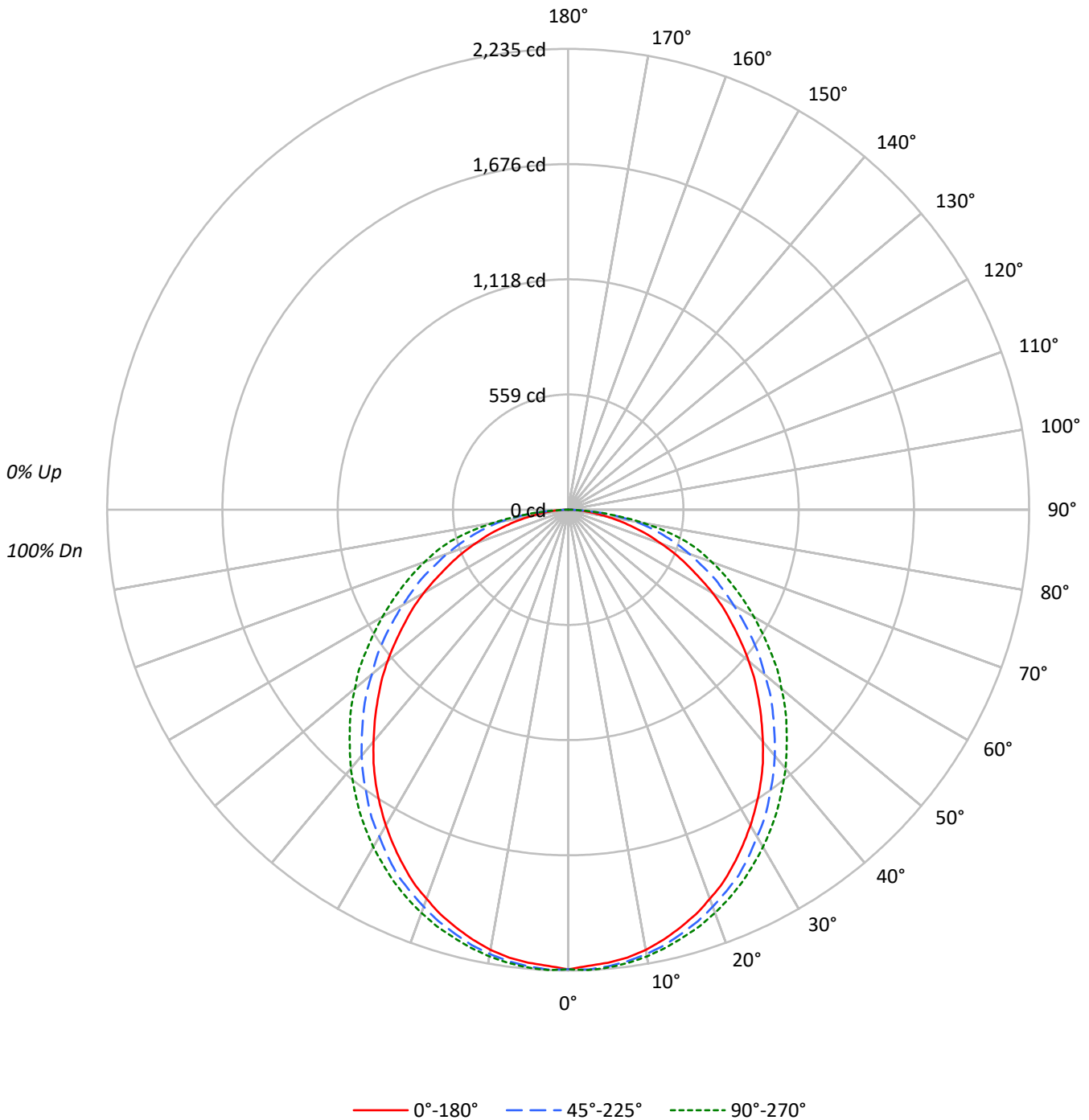
Input Watts (W): 50.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5998	5998	5998
5°	5958	6005	6021
10°	5924	5979	6011
15°	5846	5926	5983
20°	5751	5867	5959
25°	5635	5808	5920
30°	5492	5690	5871
35°	5339	5587	5816
40°	5159	5475	5760
45°	4970	5345	5699
50°	4787	5200	5650
55°	4561	5106	5610
60°	4358	4983	5592
65°	4066	4953	5655
70°	3745	4910	5822
75°	3379	4979	6125
80°	2923	5126	5757
85°	2421	4301	4301



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	210.8	3.4
10°-20°	599.8	9.6
20°-30°	897.5	14.4
30°-40°	1062.9	17.1
40°-50°	1083.2	17.4
50°-60°	970.9	15.6
60°-70°	760.1	12.2
70°-80°	490.1	7.9
80°-90°	144.8	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°	1708.1	27.5
0°-40°	2771.0	44.5
0°-60°	4825.1	77.6
0°-90°	6220.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6220.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2229	2229	2229	2229	2229	
5°	2206	2211	2223	2226	2229	209
15°	2098	2110	2127	2145	2148	592
25°	1898	1915	1956	1982	1994	874
35°	1625	1646	1701	1753	1770	1016
45°	1306	1335	1405	1477	1498	1009
55°	972	1004	1088	1164	1196	872
65°	638	676	778	853	888	634
75°	325	374	479	560	589	348
85°	78	107	139	139	139	92
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2228.9	2228.9	2228.9	2228.9	2228.9
2.5°	2214.3	2220.1	2231.8	2234.7	2234.7
5°	2205.6	2211.4	2223.1	2226.0	2228.9
7.5°	2191.1	2194.0	2208.5	2214.3	2217.2
10°	2167.9	2173.7	2188.2	2196.9	2199.8
12.5°	2136.0	2144.7	2162.1	2173.7	2176.6
15°	2098.3	2109.9	2127.3	2144.7	2147.6
17.5°	2057.6	2069.2	2092.5	2112.8	2118.6
20°	2008.3	2022.8	2048.9	2072.1	2080.8
22.5°	1959.0	1970.6	2002.5	2031.5	2040.2
25°	1898.0	1915.4	1956.1	1982.2	1993.8
27.5°	1834.2	1854.5	1895.1	1929.9	1941.5
30°	1767.4	1787.7	1831.3	1874.8	1889.3
32.5°	1697.8	1721.0	1773.2	1816.7	1831.3
35°	1625.2	1645.5	1700.7	1752.9	1770.3
37.5°	1549.8	1567.2	1631.0	1686.2	1703.6
40°	1468.5	1491.7	1558.5	1622.3	1639.7
42.5°	1387.2	1413.3	1480.1	1549.8	1567.2
45°	1306.0	1335.0	1404.6	1477.2	1497.5
47.5°	1227.6	1250.8	1329.2	1398.8	1427.9
50°	1143.4	1166.7	1242.1	1320.5	1349.5
52.5°	1056.4	1088.3	1169.6	1245.0	1279.9
55°	972.2	1004.1	1088.3	1163.8	1195.7
57.5°	893.9	920.0	1007.0	1085.4	1117.3
60°	809.7	832.9	925.8	1010.0	1039.0
62.5°	719.7	754.6	850.3	928.7	963.5
65°	638.5	676.2	777.8	853.2	888.1
67.5°	563.0	597.8	696.5	777.8	815.5
70°	476.0	522.4	624.0	705.2	740.0
72.5°	406.3	446.9	551.4	632.7	670.4
75°	325.0	374.4	478.9	560.1	589.1
77.5°	258.3	307.6	406.3	470.1	484.7
80°	188.6	238.0	330.8	362.8	371.5
82.5°	127.7	174.1	238.0	246.7	249.6
85°	78.4	107.4	139.3	139.3	139.3
87.5°	37.7	43.5	49.3	46.4	46.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)