

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: P389378

Luminaire Tested: **22CZ2-70VHE-S-UNV-L935-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: P389378  
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-L935-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6233.7 lumens  
Efficiency: N/A  
Efficacy: 123.9 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

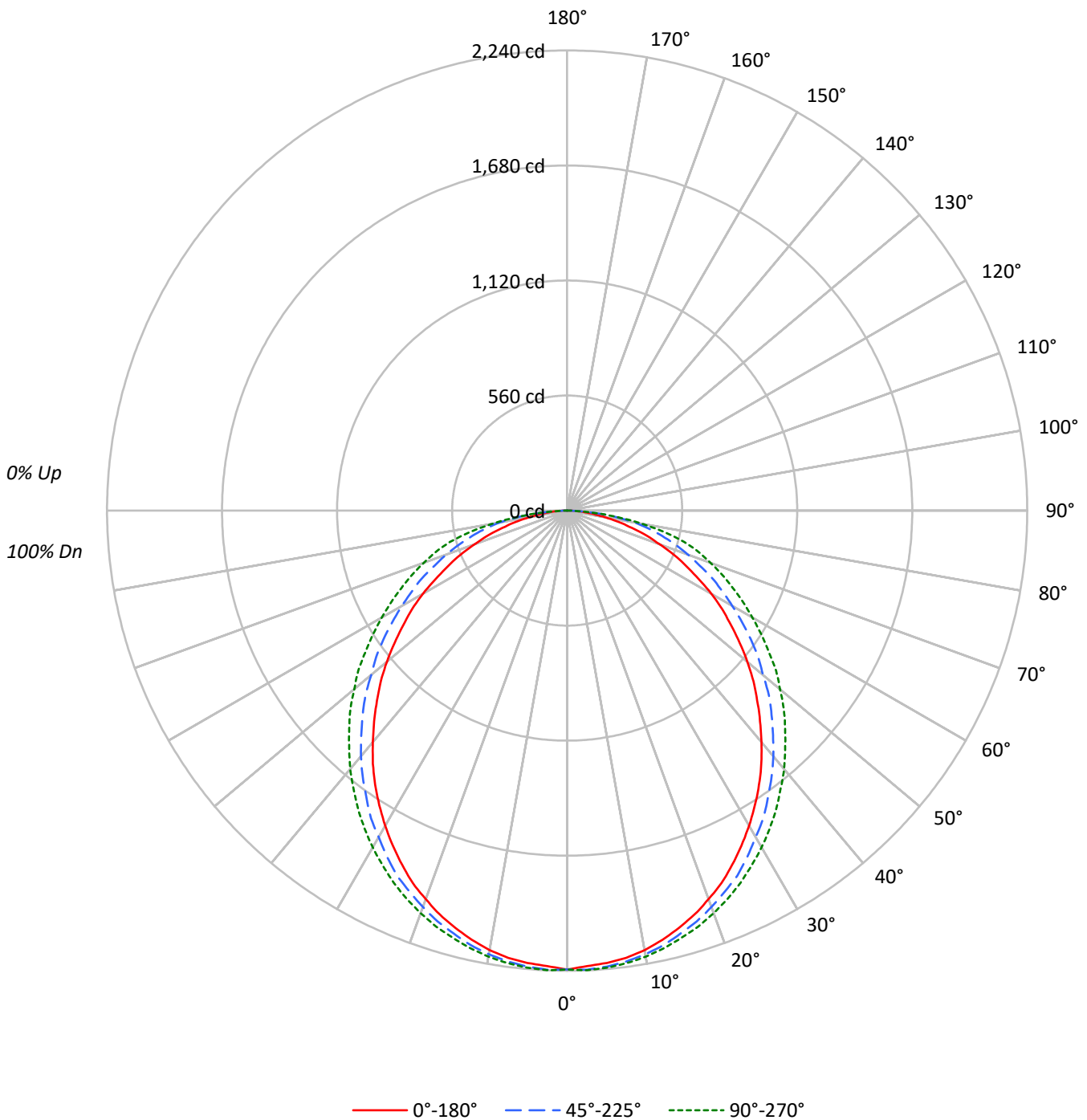
Input Watts (W): 50.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	6011	6011	6011
5°	5971	6018	6034
10°	5937	5992	6024
15°	5858	5939	5996
20°	5764	5880	5972
25°	5648	5820	5933
30°	5504	5703	5883
35°	5351	5599	5828
40°	5170	5487	5773
45°	4981	5357	5711
50°	4797	5211	5662
55°	4571	5117	5622
60°	4367	4993	5604
65°	4074	4963	5667
70°	3753	4920	5836
75°	3387	4990	6138
80°	2930	5139	5769
85°	2424	4310	4310



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	211.2	3.4
10°-20°	601.2	9.6
20°-30°	899.5	14.4
30°-40°	1065.2	17.1
40°-50°	1085.6	17.4
50°-60°	973.0	15.6
60°-70°	761.8	12.2
70°-80°	491.2	7.9
80°-90°	145.1	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°	1711.9	27.5
0°-40°	2777.1	44.5
0°-60°	4835.6	77.6
0°-90°	6233.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6233.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2234	2234	2234	2234	2234	
5°	2210	2216	2228	2231	2234	210
15°	2103	2114	2132	2149	2152	593
25°	1902	1920	1960	1986	1998	876
35°	1629	1649	1704	1757	1774	1018
45°	1309	1338	1408	1480	1501	1011
55°	974	1006	1091	1166	1198	874
65°	640	678	780	855	890	636
75°	326	375	480	561	590	349
85°	78	108	140	140	140	92
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2233.7	2233.7	2233.7	2233.7	2233.7
2.5°	2219.2	2225.0	2236.6	2239.5	2239.5
5°	2210.5	2216.3	2227.9	2230.8	2233.7
7.5°	2195.9	2198.8	2213.4	2219.2	2222.1
10°	2172.7	2178.5	2193.0	2201.7	2204.6
12.5°	2140.7	2149.4	2166.8	2178.5	2181.4
15°	2102.8	2114.5	2131.9	2149.4	2152.3
17.5°	2062.1	2073.8	2097.0	2117.4	2123.2
20°	2012.7	2027.2	2053.4	2076.7	2085.4
22.5°	1963.2	1974.9	2006.9	2036.0	2044.7
25°	1902.2	1919.6	1960.3	1986.5	1998.1
27.5°	1838.2	1858.5	1899.3	1934.2	1945.8
30°	1771.3	1791.6	1835.3	1878.9	1893.4
32.5°	1701.5	1724.7	1777.1	1820.7	1835.3
35°	1628.8	1649.1	1704.4	1756.7	1774.2
37.5°	1553.1	1570.6	1634.6	1689.8	1707.3
40°	1471.7	1495.0	1561.9	1625.9	1643.3
42.5°	1390.3	1416.4	1483.3	1553.1	1570.6
45°	1308.8	1337.9	1407.7	1480.4	1500.8
47.5°	1230.3	1253.6	1332.1	1401.9	1431.0
50°	1145.9	1169.2	1244.8	1323.4	1352.5
52.5°	1058.7	1090.7	1172.1	1247.7	1282.6
55°	974.3	1006.3	1090.7	1166.3	1198.3
57.5°	895.8	922.0	1009.2	1087.8	1119.8
60°	811.5	834.7	927.8	1012.2	1041.2
62.5°	721.3	756.2	852.2	930.7	965.6
65°	639.9	677.7	779.5	855.1	890.0
67.5°	564.2	599.2	698.0	779.5	817.3
70°	477.0	523.5	625.3	706.8	741.7
72.5°	407.2	447.9	552.6	634.1	671.9
75°	325.8	375.2	479.9	561.3	590.4
77.5°	258.9	308.3	407.2	471.2	485.7
80°	189.1	238.5	331.6	363.6	372.3
82.5°	128.0	174.5	238.5	247.2	250.1
85°	78.5	107.6	139.6	139.6	139.6
87.5°	37.8	43.6	49.4	46.5	46.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)