

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: P388447

Luminaire Tested: **22CZ2-70VHE-UNV-L950-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: P388447  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-70VHE-UNV-L950-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6283.4 lumens  
Efficiency: N/A  
Efficacy: 124.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

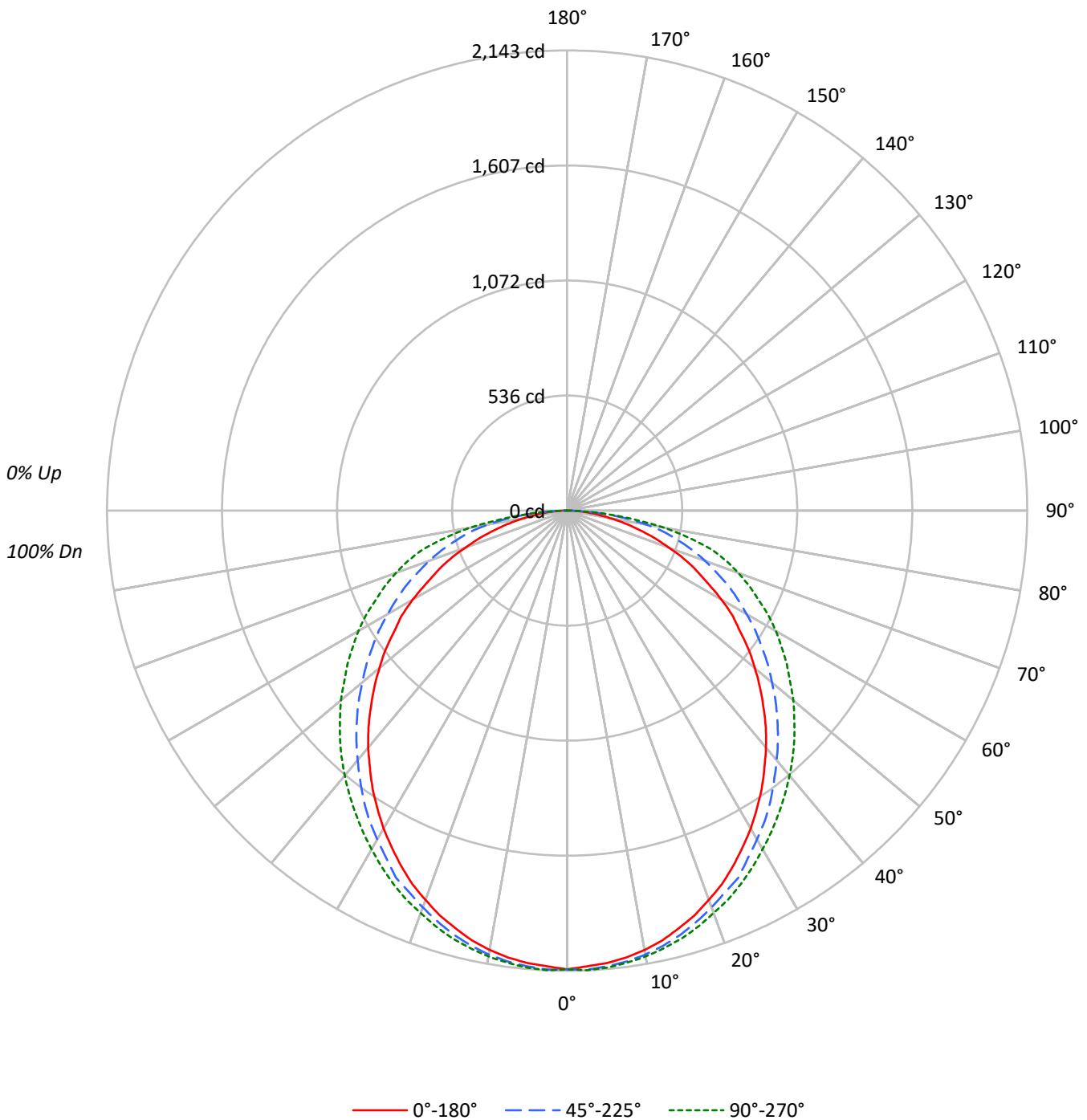
Input Watts (W): 50.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	5749	5749	5749
5°	5713	5754	5771
10°	5677	5737	5762
15°	5607	5694	5745
20°	5525	5631	5711
25°	5426	5600	5692
30°	5313	5495	5659
35°	5190	5424	5647
40°	5061	5333	5659
45°	4918	5272	5695
50°	4776	5216	5760
55°	4613	5193	5860
60°	4476	5192	6040
65°	4252	5276	6260
70°	3965	5376	6666
75°	3633	5561	7201
80°	3163	5797	7091
85°	2770	5156	5632



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	202.1	3.2
10°-20°	575.5	9.2
20°-30°	863.9	13.7
30°-40°	1032.3	16.4
40°-50°	1073.5	17.1
50°-60°	994.9	15.8
60°-70°	816.1	13.0
70°-80°	551.7	8.8
80°-90°	173.4	2.8
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°	1641.5	26.1
0°-40°	2673.8	42.6
0°-60°	4742.3	75.5
0°-90°	6283.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6283.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2136	2136	2136	2136	2136	
5°	2115	2118	2130	2133	2136	201
15°	2013	2022	2044	2056	2062	568
25°	1827	1843	1886	1908	1917	842
35°	1580	1602	1651	1700	1719	988
45°	1292	1317	1385	1466	1496	998
55°	983	1014	1107	1206	1249	884
65°	668	705	829	937	983	660
75°	349	408	535	643	693	371
85°	90	124	167	186	182	102
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2136.5	2136.5	2136.5	2136.5	2136.5
2.5°	2124.1	2130.3	2139.6	2142.7	2142.7
5°	2114.8	2117.9	2130.3	2133.4	2136.5
7.5°	2099.4	2105.6	2117.9	2121.0	2124.1
10°	2077.7	2083.9	2099.4	2105.6	2108.6
12.5°	2049.9	2056.1	2074.6	2083.9	2087.0
15°	2012.8	2022.1	2043.7	2056.1	2062.3
17.5°	1975.7	1985.0	2006.6	2025.2	2031.3
20°	1929.3	1951.0	1966.4	1991.2	1994.2
22.5°	1882.9	1895.3	1923.1	1947.9	1960.2
25°	1827.3	1842.7	1886.0	1907.7	1917.0
27.5°	1768.5	1790.2	1824.2	1858.2	1870.6
30°	1709.8	1725.3	1768.5	1808.7	1821.1
32.5°	1644.9	1666.5	1712.9	1753.1	1771.6
35°	1579.9	1601.6	1651.1	1700.5	1719.1
37.5°	1508.8	1533.6	1583.0	1641.8	1666.5
40°	1440.8	1459.4	1518.1	1589.2	1610.9
42.5°	1369.7	1391.3	1453.2	1530.5	1555.2
45°	1292.4	1317.1	1385.2	1465.5	1496.5
47.5°	1218.2	1242.9	1317.1	1397.5	1434.6
50°	1140.9	1171.8	1246.0	1338.8	1375.9
52.5°	1066.7	1094.5	1178.0	1273.8	1307.9
55°	983.2	1014.1	1106.9	1205.8	1249.1
57.5°	915.2	936.8	1038.9	1140.9	1184.2
60°	831.7	859.5	964.7	1072.9	1122.3
62.5°	742.0	788.4	896.6	1007.9	1057.4
65°	667.8	704.9	828.6	936.8	983.2
67.5°	590.5	630.7	751.3	865.7	918.3
70°	504.0	556.5	683.3	797.7	847.2
72.5°	426.7	482.3	612.2	723.5	776.1
75°	349.4	408.1	534.9	643.1	692.6
77.5°	275.2	340.1	463.8	547.3	578.2
80°	204.1	265.9	374.1	432.9	457.6
82.5°	142.2	194.8	275.2	306.1	312.3
85°	89.7	123.7	167.0	185.5	182.4
87.5°	40.2	49.5	61.8	68.0	64.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)