

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: P388159

Luminaire Tested: **22CZ2-70VHE-SQR-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: P388159  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-70VHE-SQR-UNV-L940-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5685.2 lumens  
Efficiency: N/A  
Efficacy: 113.0 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

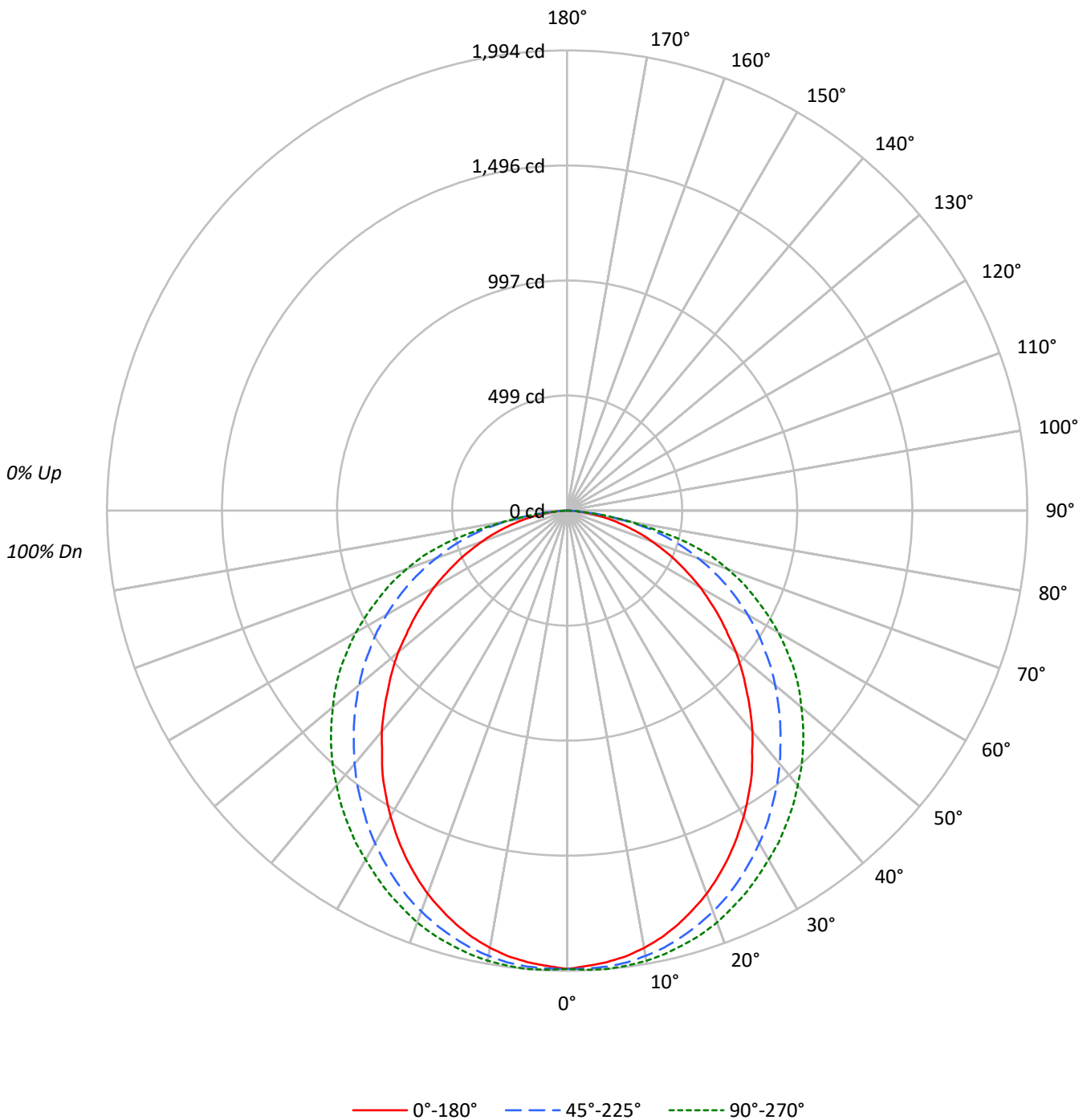
Input Watts (W): 50.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	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	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	5344	5344	5344
5°	5306	5357	5387
10°	5257	5353	5412
15°	5172	5330	5428
20°	5061	5293	5440
25°	4919	5240	5432
30°	4754	5173	5425
35°	4583	5097	5443
40°	4389	5033	5460
45°	4179	4970	5504
50°	3999	4925	5547
55°	3785	4887	5634
60°	3587	4865	5692
65°	3351	4828	5738
70°	3079	4755	5817
75°	2777	4629	5611
80°	2383	4097	4223
85°	1917	2418	1917



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	188.3	3.3
10°-20°	538.3	9.5
20°-30°	808.5	14.2
30°-40°	964.2	17.0
40°-50°	996.9	17.5
50°-60°	916.6	16.1
60°-70°	729.7	12.8
70°-80°	445.8	7.8
80°-90°	96.9	1.7
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°	1535.1	27.0
0°-40°	2499.3	44.0
0°-60°	4412.8	77.6
0°-90°	5685.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5685.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1986	1986	1986	1986	1986	
5°	1964	1970	1983	1991	1994	186
15°	1856	1878	1913	1940	1948	523
25°	1657	1697	1765	1813	1830	762
35°	1395	1454	1552	1632	1657	870
45°	1098	1176	1306	1411	1446	849
55°	807	896	1042	1160	1201	722
65°	526	615	758	864	901	521
75°	267	345	445	524	540	285
85°	62	76	78	68	62	72
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1986.0	1986.0	1986.0	1986.0	1986.0
2.5°	1975.2	1977.9	1986.0	1991.4	1991.4
5°	1964.4	1969.8	1983.3	1991.4	1994.1
7.5°	1948.2	1956.3	1975.2	1986.0	1988.7
10°	1923.9	1934.7	1959.0	1975.2	1980.6
12.5°	1894.2	1910.4	1940.1	1961.7	1967.1
15°	1856.5	1878.0	1913.1	1940.1	1948.2
17.5°	1813.3	1840.3	1883.4	1915.8	1926.6
20°	1767.4	1794.4	1848.4	1886.1	1899.6
22.5°	1713.4	1748.5	1810.6	1853.8	1864.6
25°	1656.8	1697.3	1764.7	1813.3	1829.5
27.5°	1594.7	1643.3	1716.1	1775.5	1789.0
30°	1530.0	1581.2	1664.9	1729.6	1745.8
32.5°	1462.5	1521.9	1610.9	1683.8	1705.4
35°	1395.0	1454.4	1551.5	1632.5	1656.8
37.5°	1316.8	1386.9	1494.9	1578.5	1608.2
40°	1249.3	1316.8	1432.8	1524.6	1554.2
42.5°	1173.8	1246.6	1368.1	1467.9	1503.0
45°	1098.2	1176.5	1306.0	1411.2	1446.3
47.5°	1028.1	1106.3	1241.2	1351.9	1386.9
50°	955.2	1036.2	1176.5	1289.8	1324.9
52.5°	877.0	966.0	1111.7	1225.0	1265.5
55°	806.8	895.8	1041.6	1160.3	1200.8
57.5°	733.9	825.7	976.8	1090.1	1127.9
60°	666.5	755.5	903.9	1014.6	1057.7
62.5°	593.6	685.4	831.1	939.0	979.5
65°	526.2	615.2	758.2	863.5	901.2
67.5°	458.7	547.8	682.7	782.5	825.7
70°	391.3	480.3	604.4	701.6	739.3
72.5°	331.9	410.1	528.9	617.9	653.0
75°	267.1	345.4	445.2	523.5	539.7
77.5°	207.8	277.9	361.6	396.7	402.1
80°	153.8	207.8	264.4	272.5	272.5
82.5°	102.5	143.0	164.6	167.3	164.6
85°	62.1	75.6	78.3	67.5	62.1
87.5°	21.6	21.6	13.5	8.1	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)