

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: P388540

Luminaire Tested: **22CZ2-90VHE-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: P388540  
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: 22CZ2-90VHE-UNV-L940-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7698.1 lumens  
Efficiency: N/A  
Efficacy: 112.9 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

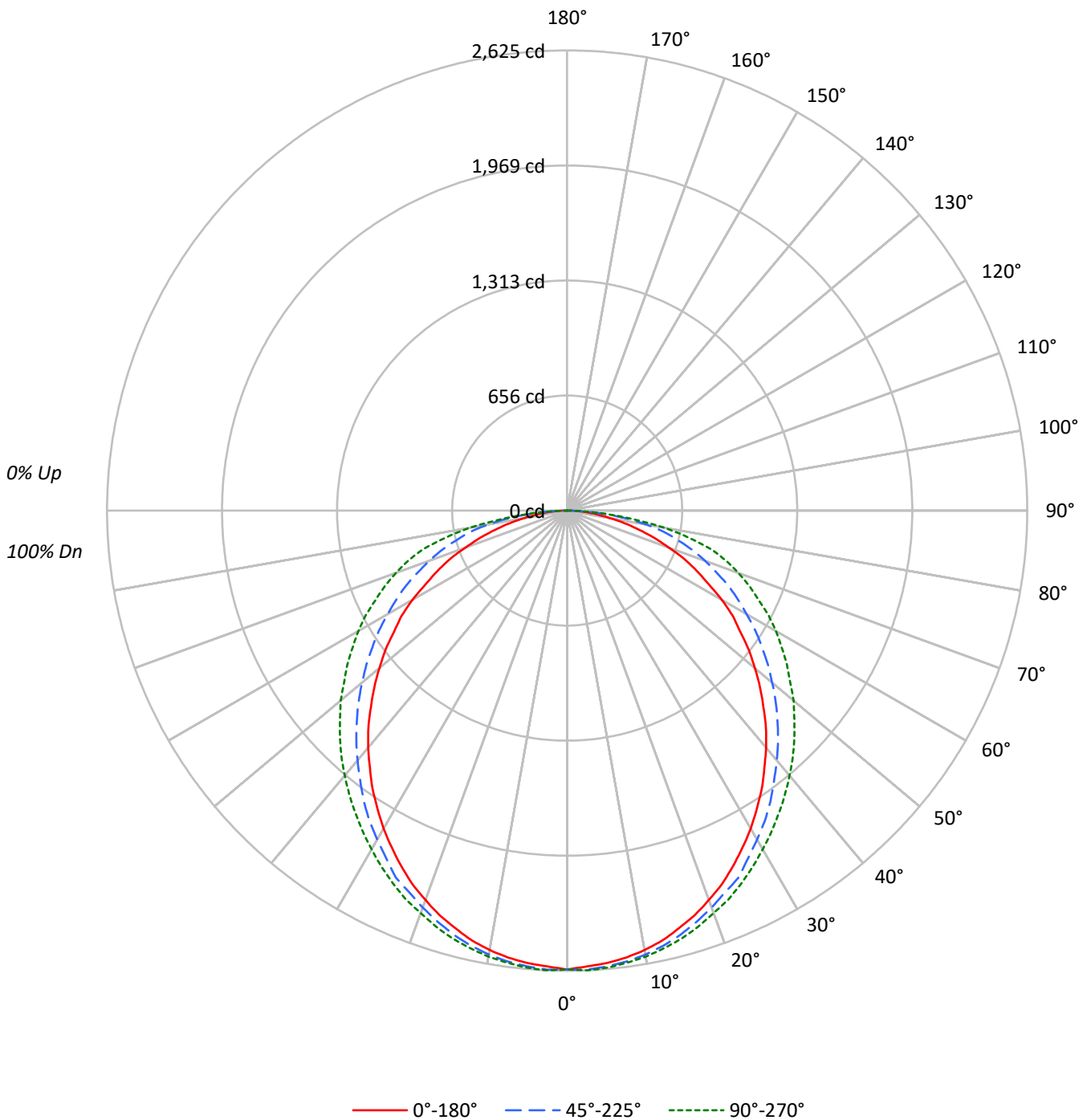
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	7044	7044	7044
5°	6999	7050	7071
10°	6956	7028	7059
15°	6870	6976	7039
20°	6769	6899	6997
25°	6647	6861	6973
30°	6509	6733	6933
35°	6359	6645	6919
40°	6201	6534	6933
45°	6026	6458	6977
50°	5852	6391	7057
55°	5651	6362	7180
60°	5484	6361	7400
65°	5210	6464	7670
70°	4858	6586	8166
75°	4450	6813	8822
80°	3874	7102	8687
85°	3393	6317	6901



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	247.5	3.2
10°-20°	705.1	9.2
20°-30°	1058.5	13.7
30°-40°	1264.8	16.4
40°-50°	1315.2	17.1
50°-60°	1219.0	15.8
60°-70°	999.8	13.0
70°-80°	675.9	8.8
80°-90°	212.4	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°	2011.1	26.1
0°-40°	3275.8	42.6
0°-60°	5810.0	75.5
0°-90°	7698.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7698.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2618	2618	2618	2618	2618	
5°	2591	2595	2610	2614	2618	246
15°	2466	2477	2504	2519	2527	696
25°	2239	2258	2311	2337	2348	1031
35°	1936	1962	2023	2083	2106	1210
45°	1583	1614	1697	1796	1833	1223
55°	1205	1242	1356	1477	1530	1083
65°	818	864	1015	1148	1205	809
75°	428	500	655	788	848	454
85°	110	152	205	227	224	125
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2617.5	2617.5	2617.5	2617.5	2617.5
2.5°	2602.3	2609.9	2621.3	2625.1	2625.1
5°	2591.0	2594.8	2609.9	2613.7	2617.5
7.5°	2572.0	2579.6	2594.8	2598.6	2602.3
10°	2545.5	2553.1	2572.0	2579.6	2583.4
12.5°	2511.4	2519.0	2541.7	2553.1	2556.9
15°	2466.0	2477.3	2503.9	2519.0	2526.6
17.5°	2420.5	2431.9	2458.4	2481.1	2488.7
20°	2363.7	2390.2	2409.2	2439.5	2443.2
22.5°	2306.9	2322.0	2356.1	2386.4	2401.6
25°	2238.7	2257.6	2310.7	2337.2	2348.5
27.5°	2166.7	2193.2	2234.9	2276.6	2291.7
30°	2094.8	2113.7	2166.7	2216.0	2231.1
32.5°	2015.2	2041.7	2098.5	2147.8	2170.5
35°	1935.7	1962.2	2022.8	2083.4	2106.1
37.5°	1848.5	1878.8	1939.4	2011.4	2041.7
40°	1765.2	1787.9	1859.9	1947.0	1973.5
42.5°	1678.1	1704.6	1780.4	1875.1	1905.4
45°	1583.4	1613.7	1697.0	1795.5	1833.4
47.5°	1492.5	1522.8	1613.7	1712.2	1757.6
50°	1397.8	1435.6	1526.6	1640.2	1685.7
52.5°	1306.9	1340.9	1443.2	1560.6	1602.3
55°	1204.6	1242.5	1356.1	1477.3	1530.3
57.5°	1121.2	1147.8	1272.8	1397.8	1450.8
60°	1019.0	1053.1	1181.9	1314.4	1375.0
62.5°	909.1	965.9	1098.5	1234.9	1295.5
65°	818.2	863.7	1015.2	1147.8	1204.6
67.5°	723.5	772.7	920.5	1060.6	1125.0
70°	617.4	681.8	837.1	977.3	1037.9
72.5°	522.7	590.9	750.0	886.4	950.8
75°	428.0	500.0	655.3	787.9	848.5
77.5°	337.1	416.7	568.2	670.5	708.4
80°	250.0	325.8	458.3	530.3	560.6
82.5°	174.2	238.6	337.1	375.0	382.6
85°	109.9	151.5	204.6	227.3	223.5
87.5°	49.2	60.6	75.8	83.3	79.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)