

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: P388253

Luminaire Tested: **22CZ2-90VHE-SQR-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: P388253  
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: 22CZ2-90VHE-SQR-UNV-L935-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7409.4 lumens  
Efficiency: N/A  
Efficacy: 108.6 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

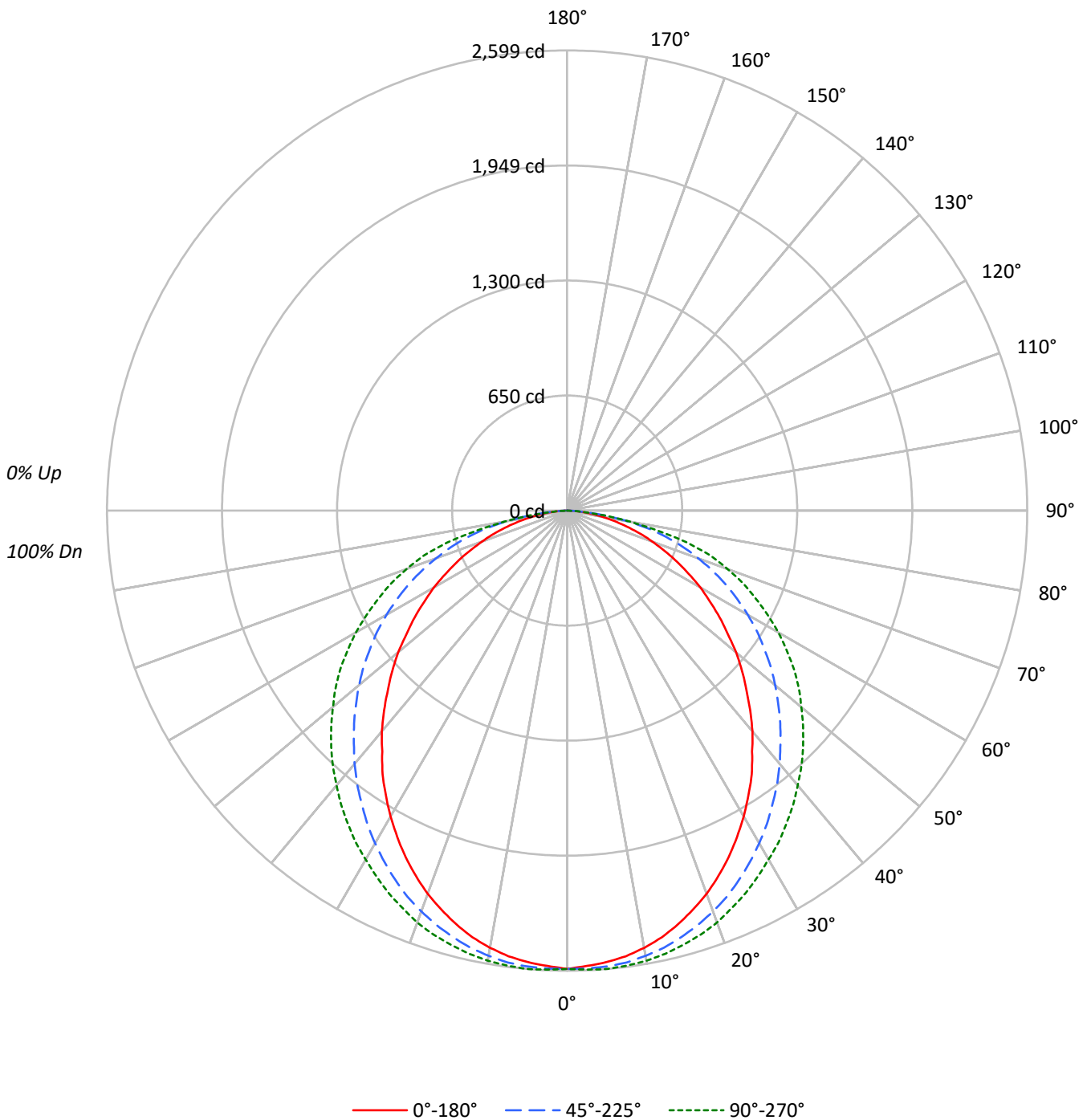
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	6965	6965	6965
5°	6915	6982	7020
10°	6851	6976	7053
15°	6741	6946	7073
20°	6596	6898	7090
25°	6411	6829	7079
30°	6196	6742	7070
35°	5973	6643	7093
40°	5720	6560	7116
45°	5447	6478	7173
50°	5212	6419	7229
55°	4933	6368	7342
60°	4675	6340	7419
65°	4367	6292	7479
70°	4012	6198	7582
75°	3620	6033	7312
80°	3107	5340	5504
85°	2498	3149	2498



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	245.4	3.3
10°-20°	701.5	9.5
20°-30°	1053.7	14.2
30°-40°	1256.7	17.0
40°-50°	1299.3	17.5
50°-60°	1194.5	16.1
60°-70°	951.0	12.8
70°-80°	581.0	7.8
80°-90°	126.3	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°	2000.6	27.0
0°-40°	3257.3	44.0
0°-60°	5751.1	77.6
0°-90°	7409.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7409.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2588	2588	2588	2588	2588	
5°	2560	2567	2585	2595	2599	243
15°	2420	2448	2493	2528	2539	681
25°	2159	2212	2300	2363	2384	993
35°	1818	1896	2022	2128	2159	1134
45°	1431	1533	1702	1839	1885	1107
55°	1052	1168	1357	1512	1565	941
65°	686	802	988	1125	1175	679
75°	348	450	580	682	703	371
85°	81	98	102	88	81	93
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2588.3	2588.3	2588.3	2588.3	2588.3
2.5°	2574.2	2577.7	2588.3	2595.3	2595.3
5°	2560.1	2567.2	2584.8	2595.3	2598.8
7.5°	2539.0	2549.6	2574.2	2588.3	2591.8
10°	2507.4	2521.5	2553.1	2574.2	2581.2
12.5°	2468.7	2489.8	2528.5	2556.6	2563.7
15°	2419.5	2447.6	2493.3	2528.5	2539.0
17.5°	2363.2	2398.4	2454.6	2496.8	2510.9
20°	2303.4	2338.6	2408.9	2458.2	2475.7
22.5°	2233.1	2278.8	2359.7	2416.0	2430.0
25°	2159.2	2212.0	2299.9	2363.2	2384.3
27.5°	2078.4	2141.7	2236.6	2314.0	2331.6
30°	1994.0	2060.8	2169.8	2254.2	2275.3
32.5°	1906.0	1983.4	2099.5	2194.4	2222.5
35°	1818.1	1895.5	2022.1	2127.6	2159.2
37.5°	1716.1	1807.6	1948.2	2057.3	2095.9
40°	1628.2	1716.1	1867.4	1986.9	2025.6
42.5°	1529.8	1624.7	1783.0	1913.1	1958.8
45°	1431.3	1533.3	1702.1	1839.2	1884.9
47.5°	1339.9	1441.8	1617.7	1761.9	1807.6
50°	1244.9	1350.4	1533.3	1681.0	1726.7
52.5°	1142.9	1259.0	1448.9	1596.6	1649.3
55°	1051.5	1167.5	1357.4	1512.2	1564.9
57.5°	956.5	1076.1	1273.0	1420.7	1470.0
60°	868.6	984.7	1178.1	1322.3	1378.5
62.5°	773.7	893.2	1083.1	1223.8	1276.6
65°	685.8	801.8	988.2	1125.3	1174.6
67.5°	597.8	713.9	889.7	1019.8	1076.1
70°	509.9	626.0	787.7	914.3	963.6
72.5°	432.6	534.5	689.3	805.3	851.0
75°	348.2	450.1	580.3	682.2	703.3
77.5°	270.8	362.2	471.2	517.0	524.0
80°	200.5	270.8	344.6	355.2	355.2
82.5°	133.6	186.4	214.5	218.0	214.5
85°	80.9	98.5	102.0	87.9	80.9
87.5°	28.1	28.1	17.6	10.6	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)