

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: P388536

Luminaire Tested: **22CZ2-90VHE-UNV-L935-CD1-SDWPD1-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: P388536  
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-L935-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

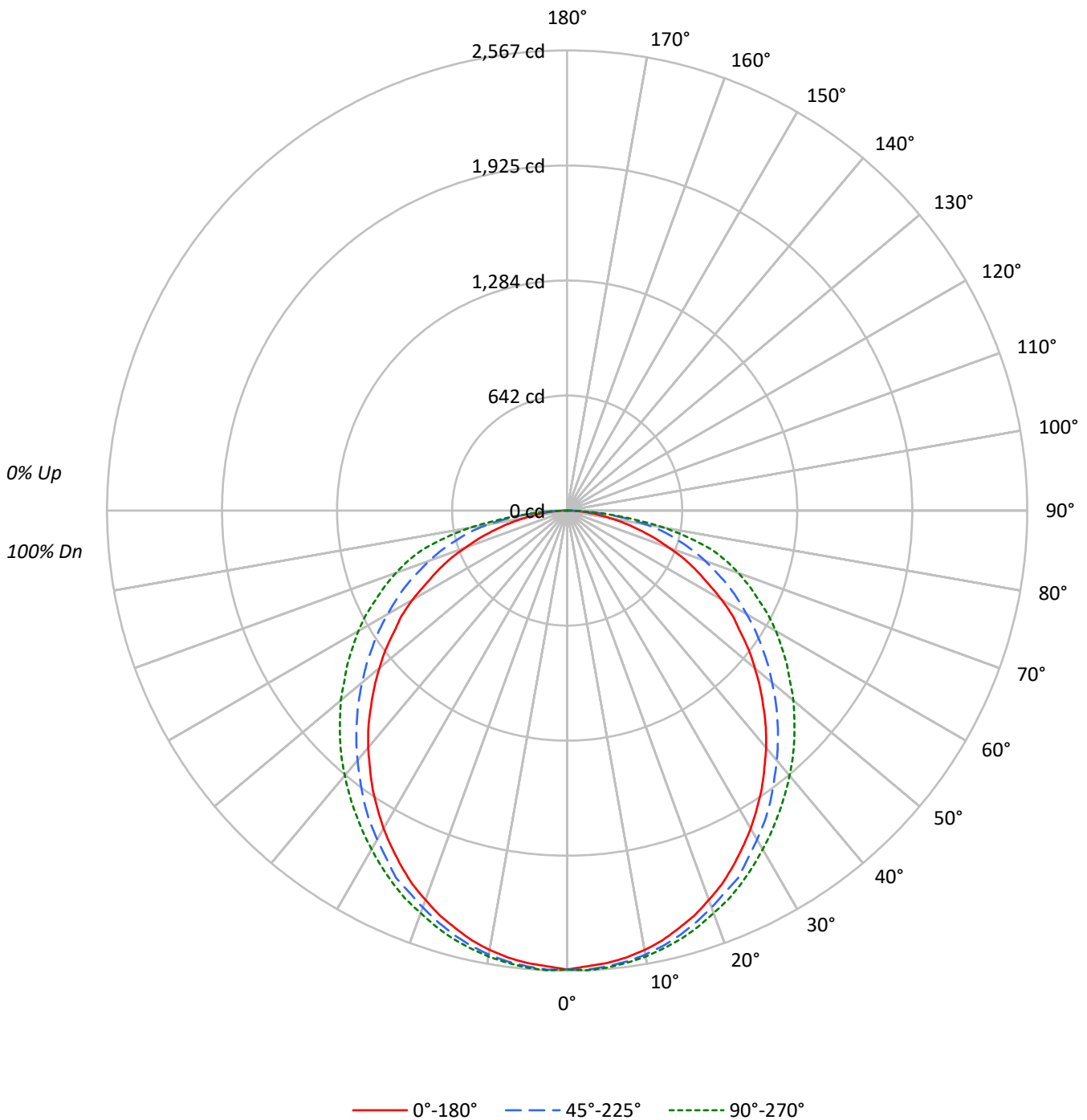
Lumens per Lamp: N/A  
Luminaire Lumens: 7527.4 lumens  
Efficiency: N/A  
Efficacy: 110.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	6888	6888	6888
5°	6844	6894	6914
10°	6801	6872	6903
15°	6718	6821	6883
20°	6619	6746	6842
25°	6500	6709	6819
30°	6365	6583	6779
35°	6218	6498	6765
40°	6063	6389	6779
45°	5892	6315	6822
50°	5722	6249	6900
55°	5526	6221	7020
60°	5363	6219	7236
65°	5095	6321	7500
70°	4750	6441	7985
75°	4352	6662	8627
80°	3789	6946	8495
85°	3316	6175	6746



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	242.1	3.2
10°-20°	689.4	9.2
20°-30°	1035.0	13.7
30°-40°	1236.7	16.4
40°-50°	1286.0	17.1
50°-60°	1191.9	15.8
60°-70°	977.7	13.0
70°-80°	660.9	8.8
80°-90°	207.7	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°	1966.5	26.1
0°-40°	3203.2	42.6
0°-60°	5681.1	75.5
0°-90°	7527.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7527.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2560	2560	2560	2560	2560	
5°	2534	2537	2552	2556	2560	240
15°	2411	2422	2448	2463	2471	680
25°	2189	2208	2259	2285	2296	1008
35°	1893	1919	1978	2037	2059	1183
45°	1548	1578	1659	1756	1793	1196
55°	1178	1215	1326	1445	1496	1059
65°	800	844	993	1122	1178	791
75°	419	489	641	770	830	444
85°	107	148	200	222	218	122
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2559.5	2559.5	2559.5	2559.5	2559.5
2.5°	2544.6	2552.0	2563.2	2566.9	2566.9
5°	2533.5	2537.2	2552.0	2555.8	2559.5
7.5°	2515.0	2522.4	2537.2	2540.9	2544.6
10°	2489.1	2496.5	2515.0	2522.4	2526.1
12.5°	2455.7	2463.2	2485.4	2496.5	2500.2
15°	2411.3	2422.4	2448.3	2463.2	2470.6
17.5°	2366.8	2378.0	2403.9	2426.1	2433.5
20°	2311.3	2337.2	2355.7	2385.4	2389.1
22.5°	2255.7	2270.5	2303.9	2333.5	2348.3
25°	2189.1	2207.6	2259.4	2285.4	2296.5
27.5°	2118.7	2144.6	2185.4	2226.1	2240.9
30°	2048.3	2066.8	2118.7	2166.8	2181.6
32.5°	1970.5	1996.4	2052.0	2100.2	2122.4
35°	1892.7	1918.7	1977.9	2037.2	2059.4
37.5°	1807.5	1837.2	1896.4	1966.8	1996.4
40°	1726.1	1748.3	1818.7	1903.8	1929.8
42.5°	1640.9	1666.8	1740.9	1833.5	1863.1
45°	1548.3	1577.9	1659.4	1755.7	1792.7
47.5°	1459.4	1489.0	1577.9	1674.2	1718.6
50°	1366.8	1403.8	1492.7	1603.8	1648.3
52.5°	1277.9	1311.2	1411.2	1526.0	1566.8
55°	1177.9	1214.9	1326.0	1444.6	1496.4
57.5°	1096.4	1122.3	1244.5	1366.8	1418.6
60°	996.4	1029.7	1155.6	1285.3	1344.5
62.5°	889.0	944.5	1074.2	1207.5	1266.8
65°	800.1	844.5	992.7	1122.3	1177.9
67.5°	707.5	755.6	900.1	1037.1	1100.1
70°	603.7	666.7	818.6	955.6	1014.9
72.5°	511.2	577.8	733.4	866.7	929.7
75°	418.6	488.9	640.8	770.4	829.7
77.5°	329.7	407.4	555.6	655.6	692.6
80°	244.5	318.5	448.2	518.6	548.2
82.5°	170.4	233.4	329.7	366.7	374.1
85°	107.4	148.2	200.0	222.2	218.5
87.5°	48.2	59.3	74.1	81.5	77.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)