

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: P388538

Luminaire Tested: **22CZ2-90VHE-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: P388538
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-U
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

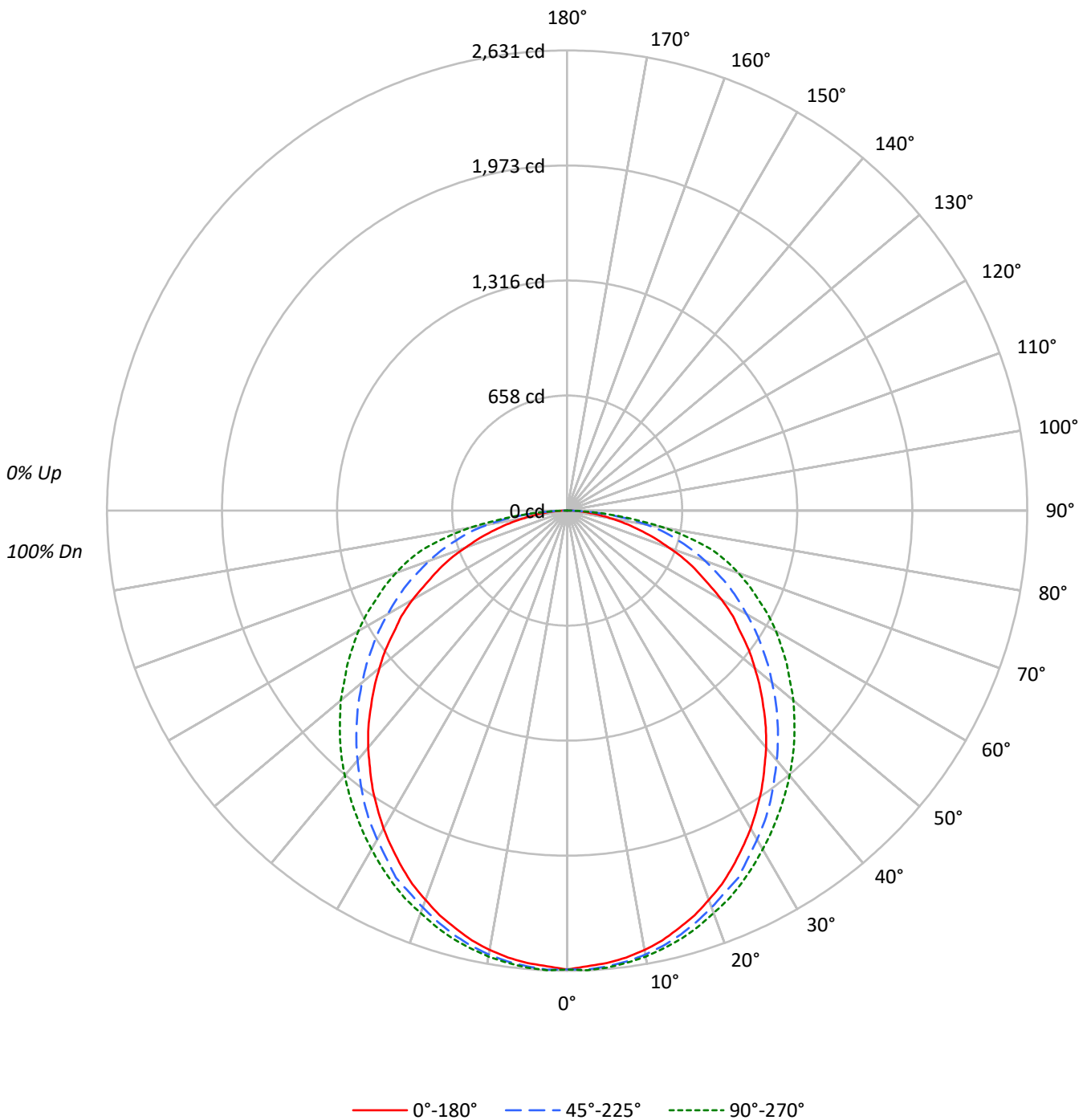
Lumens per Lamp: N/A
Luminaire Lumens: 7715.0 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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



TEST NUMBER: P388538
CATALOG NUMBER: 22CZ2-90VHE-UNV-L935-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388538

CATALOG NUMBER: 22CZ2-90VHE-UNV-L935-CD1-U

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°	7059	7059	7059
5°	7014	7065	7086
10°	6971	7044	7075
15°	6885	6991	7054
20°	6784	6914	7012
25°	6662	6876	6989
30°	6523	6747	6948
35°	6373	6660	6934
40°	6215	6548	6948
45°	6039	6472	6992
50°	5864	6405	7073
55°	5664	6376	7195
60°	5496	6374	7417
65°	5221	6478	7687
70°	4869	6601	8184
75°	4460	6829	8842
80°	3883	7119	8708
85°	3399	6329	6916



TEST NUMBER: P388538

CATALOG NUMBER: 22CZ2-90VHE-UNV-L935-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.1	3.2
10°-20°	706.6	9.2
20°-30°	1060.8	13.7
30°-40°	1267.5	16.4
40°-50°	1318.1	17.1
50°-60°	1221.6	15.8
60°-70°	1002.0	13.0
70°-80°	677.4	8.8
80°-90°	212.9	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°	2015.5	26.1
0°-40°	3283.0	42.6
0°-60°	5822.7	75.5
0°-90°	7715.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7715.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2623	2623	2623	2623	2623	
5°	2597	2600	2616	2619	2623	246
15°	2471	2483	2509	2524	2532	697
25°	2244	2263	2316	2342	2354	1033
35°	1940	1966	2027	2088	2111	1213
45°	1587	1617	1701	1799	1837	1225
55°	1207	1245	1359	1481	1534	1085
65°	820	866	1017	1150	1207	811
75°	429	501	657	790	850	455
85°	110	152	205	228	224	125
90°	0	0	0	0	0	



TEST NUMBER: P388538

CATALOG NUMBER: 22CZ2-90VHE-UNV-L935-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2623.2	2623.2	2623.2	2623.2	2623.2
2.5°	2608.1	2615.6	2627.0	2630.8	2630.8
5°	2596.7	2600.5	2615.6	2619.4	2623.2
7.5°	2577.7	2585.3	2600.5	2604.3	2608.1
10°	2551.1	2558.7	2577.7	2585.3	2589.1
12.5°	2516.9	2524.5	2547.3	2558.7	2562.5
15°	2471.4	2482.8	2509.4	2524.5	2532.1
17.5°	2425.8	2437.2	2463.8	2486.6	2494.2
20°	2368.9	2395.5	2414.4	2444.8	2448.6
22.5°	2311.9	2327.1	2361.3	2391.7	2406.9
25°	2243.6	2262.6	2315.7	2342.3	2353.7
27.5°	2171.5	2198.1	2239.8	2281.6	2296.8
30°	2099.4	2118.3	2171.5	2220.8	2236.0
32.5°	2019.6	2046.2	2103.1	2152.5	2175.3
35°	1939.9	1966.5	2027.2	2088.0	2110.7
37.5°	1852.6	1883.0	1943.7	2015.8	2046.2
40°	1769.1	1791.9	1864.0	1951.3	1977.9
42.5°	1681.8	1708.3	1784.3	1879.2	1909.5
45°	1586.9	1617.2	1700.7	1799.4	1837.4
47.5°	1495.7	1526.1	1617.2	1715.9	1761.5
50°	1400.8	1438.8	1529.9	1643.8	1689.4
52.5°	1309.7	1343.9	1446.4	1564.1	1605.8
55°	1207.2	1245.2	1359.1	1480.6	1533.7
57.5°	1123.7	1150.3	1275.6	1400.8	1454.0
60°	1021.2	1055.4	1184.4	1317.3	1378.1
62.5°	911.1	968.1	1100.9	1237.6	1298.3
65°	820.0	865.6	1017.4	1150.3	1207.2
67.5°	725.1	774.4	922.5	1063.0	1127.5
70°	618.8	683.3	839.0	979.4	1040.2
72.5°	523.9	592.2	751.7	888.3	952.9
75°	429.0	501.1	656.8	789.6	850.4
77.5°	337.9	417.6	569.4	671.9	709.9
80°	250.6	326.5	459.4	531.5	561.9
82.5°	174.6	239.2	337.9	375.8	383.4
85°	110.1	151.9	205.0	227.8	224.0
87.5°	49.4	60.7	75.9	83.5	79.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)