

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: P389042

Luminaire Tested: **24CZ2-90VHE-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: P389042
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-90VHE-UNV-L935-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

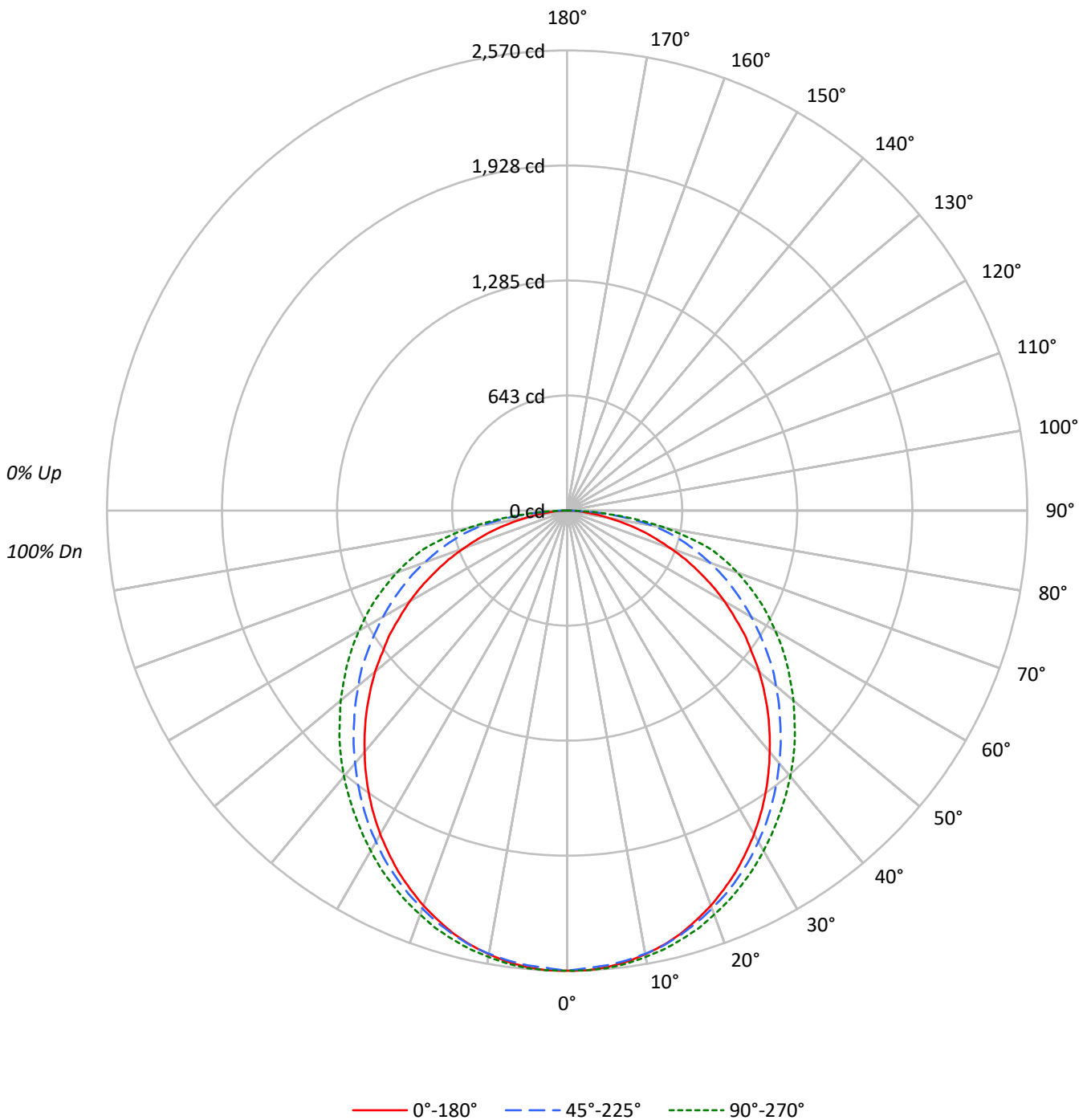
Lumens per Lamp: N/A
Luminaire Lumens: 7654.1 lumens
Efficiency: N/A
Efficacy: 123.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 61.8
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: P389042
CATALOG NUMBER: 24CZ2-90VHE-UNV-L935-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P389042

CATALOG NUMBER: 24CZ2-90VHE-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	100	96	92	96	93	89		92	89	87		89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51		62	56	51		60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39		50	44	38		49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34		46	39	34		45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30		42	35	30		41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27		39	32	27		38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25		36	29	25		35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3458	3458	3458
5°	3457	3443	3464
10°	3438	3434	3459
15°	3409	3416	3452
20°	3361	3387	3438
25°	3307	3356	3424
30°	3242	3318	3409
35°	3172	3277	3399
40°	3091	3235	3406
45°	3014	3203	3422
50°	2930	3187	3454
55°	2840	3182	3518
60°	2729	3196	3609
65°	2586	3245	3765
70°	2402	3326	3980
75°	2191	3492	4316
80°	1801	3761	4315
85°	1380	3470	3707



TEST NUMBER: P389042

CATALOG NUMBER: 24CZ2-90VHE-UNV-L935-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.0	3.2
10°-20°	693.9	9.1
20°-30°	1044.2	13.6
30°-40°	1251.3	16.3
40°-50°	1304.0	17.0
50°-60°	1213.2	15.9
60°-70°	999.2	13.1
70°-80°	680.5	8.9
80°-90°	224.7	2.9
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°	1981.1	25.9
0°-40°	3232.4	42.2
0°-60°	5749.6	75.1
0°-90°	7654.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7654.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2570	2570	2570	2570	2570	
5°	2560	2560	2549	2562	2565	243
15°	2447	2450	2452	2475	2478	689
25°	2228	2238	2261	2299	2307	1025
35°	1931	1954	1995	2049	2069	1207
45°	1584	1617	1683	1768	1798	1222
55°	1211	1252	1356	1464	1500	1079
65°	812	881	1019	1139	1183	806
75°	422	516	672	792	830	444
85°	89	174	225	240	240	111
90°	0	0	0	0	0	



TEST NUMBER: P389042

CATALOG NUMBER: 24CZ2-90VHE-UNV-L935-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2569.8	2569.8	2569.8	2569.8	2569.8
2.5°	2569.8	2569.8	2557.1	2569.8	2569.8
5°	2559.6	2559.6	2549.4	2562.2	2564.7
7.5°	2541.7	2544.3	2534.1	2549.4	2552.0
10°	2516.2	2518.7	2513.6	2529.0	2531.5
12.5°	2485.5	2488.1	2488.1	2506.0	2508.5
15°	2447.2	2449.8	2452.3	2475.3	2477.9
17.5°	2398.7	2406.3	2411.5	2439.6	2444.7
20°	2347.6	2355.3	2365.5	2396.1	2401.2
22.5°	2288.8	2299.1	2316.9	2350.1	2357.8
25°	2227.5	2237.8	2260.7	2299.1	2306.7
27.5°	2158.6	2173.9	2202.0	2242.9	2253.1
30°	2087.0	2102.4	2135.6	2179.0	2194.3
32.5°	2010.4	2030.8	2069.2	2117.7	2133.0
35°	1931.2	1954.2	1995.1	2048.7	2069.2
37.5°	1846.9	1872.5	1921.0	1979.7	2005.3
40°	1760.1	1790.7	1841.8	1910.8	1938.9
42.5°	1673.2	1701.3	1765.2	1839.2	1869.9
45°	1583.8	1617.0	1683.4	1767.7	1798.4
47.5°	1491.8	1525.0	1604.2	1693.6	1721.7
50°	1399.9	1433.1	1522.5	1617.0	1650.2
52.5°	1300.2	1343.7	1445.9	1540.4	1573.6
55°	1210.8	1251.7	1356.4	1463.7	1499.5
57.5°	1108.7	1157.2	1272.1	1384.5	1422.9
60°	1014.1	1065.2	1187.8	1302.8	1341.1
62.5°	917.1	973.3	1103.5	1221.1	1264.5
65°	812.3	881.3	1019.2	1139.3	1182.7
67.5°	717.8	789.3	935.0	1057.6	1095.9
70°	610.5	697.4	845.5	968.2	1011.6
72.5°	518.6	605.4	761.2	881.3	924.7
75°	421.5	516.0	671.8	791.9	830.2
77.5°	324.4	429.2	585.0	676.9	689.7
80°	232.5	342.3	485.4	539.0	556.9
82.5°	163.5	263.1	357.6	393.4	403.6
85°	89.4	173.7	224.8	240.1	240.1
87.5°	38.3	74.1	89.4	92.0	94.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)