

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: P389013

Luminaire Tested: **24CZ2-85VHE-UNV-L930-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: P389013  
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: 24CZ2-85VHE-UNV-L930-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6923.1 lumens  
Efficiency: N/A  
Efficacy: 119.6 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

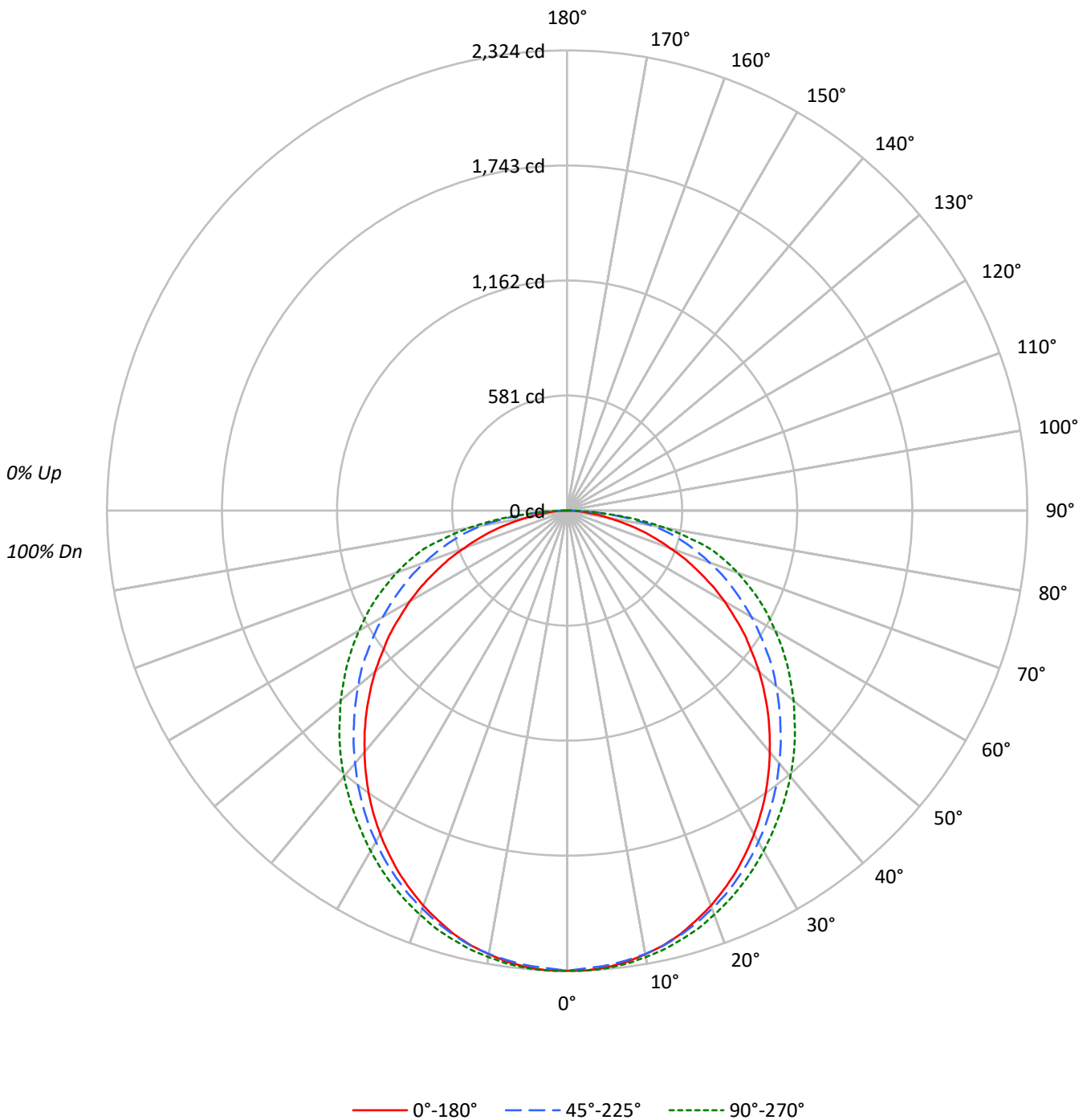
Input Watts (W): 57.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P389013

CATALOG NUMBER: 24CZ2-85VHE-UNV-L930-CD1-SDWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P389013

CATALOG NUMBER: 24CZ2-85VHE-UNV-L930-CD1-SDWPD1-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°	3127	3127	3127
5°	3127	3114	3133
10°	3109	3106	3128
15°	3083	3090	3122
20°	3040	3064	3110
25°	2991	3036	3097
30°	2933	3001	3084
35°	2869	2964	3074
40°	2796	2926	3080
45°	2726	2897	3095
50°	2650	2883	3124
55°	2569	2878	3182
60°	2468	2891	3264
65°	2339	2935	3406
70°	2172	3009	3600
75°	1982	3159	3904
80°	1629	3402	3903
85°	1249	3138	3353



TEST NUMBER: P389013

CATALOG NUMBER: 24CZ2-85VHE-UNV-L930-CD1-SDWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	219.8	3.2
10°-20°	627.6	9.1
20°-30°	944.4	13.6
30°-40°	1131.8	16.3
40°-50°	1179.5	17.0
50°-60°	1097.4	15.9
60°-70°	903.8	13.1
70°-80°	615.5	8.9
80°-90°	203.2	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°	1791.9	25.9
0°-40°	2923.7	42.2
0°-60°	5200.5	75.1
0°-90°	6923.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6923.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2324	2324	2324	2324	2324	
5°	2315	2315	2306	2318	2320	220
15°	2214	2216	2218	2239	2241	624
25°	2015	2024	2045	2080	2086	928
35°	1747	1768	1804	1853	1872	1092
45°	1432	1463	1523	1599	1627	1105
55°	1095	1132	1227	1324	1356	976
65°	735	797	922	1030	1070	729
75°	381	467	608	716	751	402
85°	81	157	203	217	217	100
90°	0	0	0	0	0	



TEST NUMBER: P389013

CATALOG NUMBER: 24CZ2-85VHE-UNV-L930-CD1-SDWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2324.4	2324.4	2324.4	2324.4	2324.4
2.5°	2324.4	2324.4	2312.9	2324.4	2324.4
5°	2315.2	2315.2	2305.9	2317.5	2319.8
7.5°	2299.0	2301.3	2292.1	2305.9	2308.2
10°	2275.9	2278.2	2273.6	2287.4	2289.7
12.5°	2248.2	2250.5	2250.5	2266.6	2269.0
15°	2213.5	2215.8	2218.1	2238.9	2241.2
17.5°	2169.6	2176.5	2181.2	2206.6	2211.2
20°	2123.4	2130.3	2139.6	2167.3	2171.9
22.5°	2070.2	2079.5	2095.7	2125.7	2132.6
25°	2014.8	2024.0	2044.8	2079.5	2086.4
27.5°	1952.4	1966.3	1991.7	2028.7	2037.9
30°	1887.7	1901.6	1931.6	1970.9	1984.8
32.5°	1818.4	1836.9	1871.5	1915.4	1929.3
35°	1746.8	1767.6	1804.5	1853.1	1871.5
37.5°	1670.5	1693.6	1737.5	1790.7	1813.8
40°	1592.0	1619.7	1665.9	1728.3	1753.7
42.5°	1513.4	1538.8	1596.6	1663.6	1691.3
45°	1432.5	1462.6	1522.6	1598.9	1626.6
47.5°	1349.4	1379.4	1451.0	1531.9	1557.3
50°	1266.2	1296.2	1377.1	1462.6	1492.6
52.5°	1176.1	1215.3	1307.8	1393.3	1423.3
55°	1095.2	1132.2	1226.9	1323.9	1356.3
57.5°	1002.8	1046.7	1150.7	1252.3	1287.0
60°	917.3	963.5	1074.4	1178.4	1213.0
62.5°	829.5	880.3	998.2	1104.4	1143.7
65°	734.8	797.1	921.9	1030.5	1069.8
67.5°	649.3	714.0	845.7	956.6	991.2
70°	552.2	630.8	764.8	875.7	915.0
72.5°	469.0	547.6	688.5	797.1	836.4
75°	381.2	466.7	607.7	716.3	750.9
77.5°	293.4	388.2	529.1	612.3	623.8
80°	210.3	309.6	439.0	487.5	503.7
82.5°	147.9	238.0	323.5	355.8	365.1
85°	80.9	157.1	203.3	217.2	217.2
87.5°	34.7	67.0	80.9	83.2	85.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)