

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: P272013

Luminaire Tested: **22CZ2-20-S-UNV-L930-CD1-U**

Issue Date: 3/3/2020

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: P272013
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-20-S-UNV-L930-CD1-U
Description: 2'X2' TROFFER LED MODULE,SMOOTH LENS, 90CRI
Light Source: (56) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

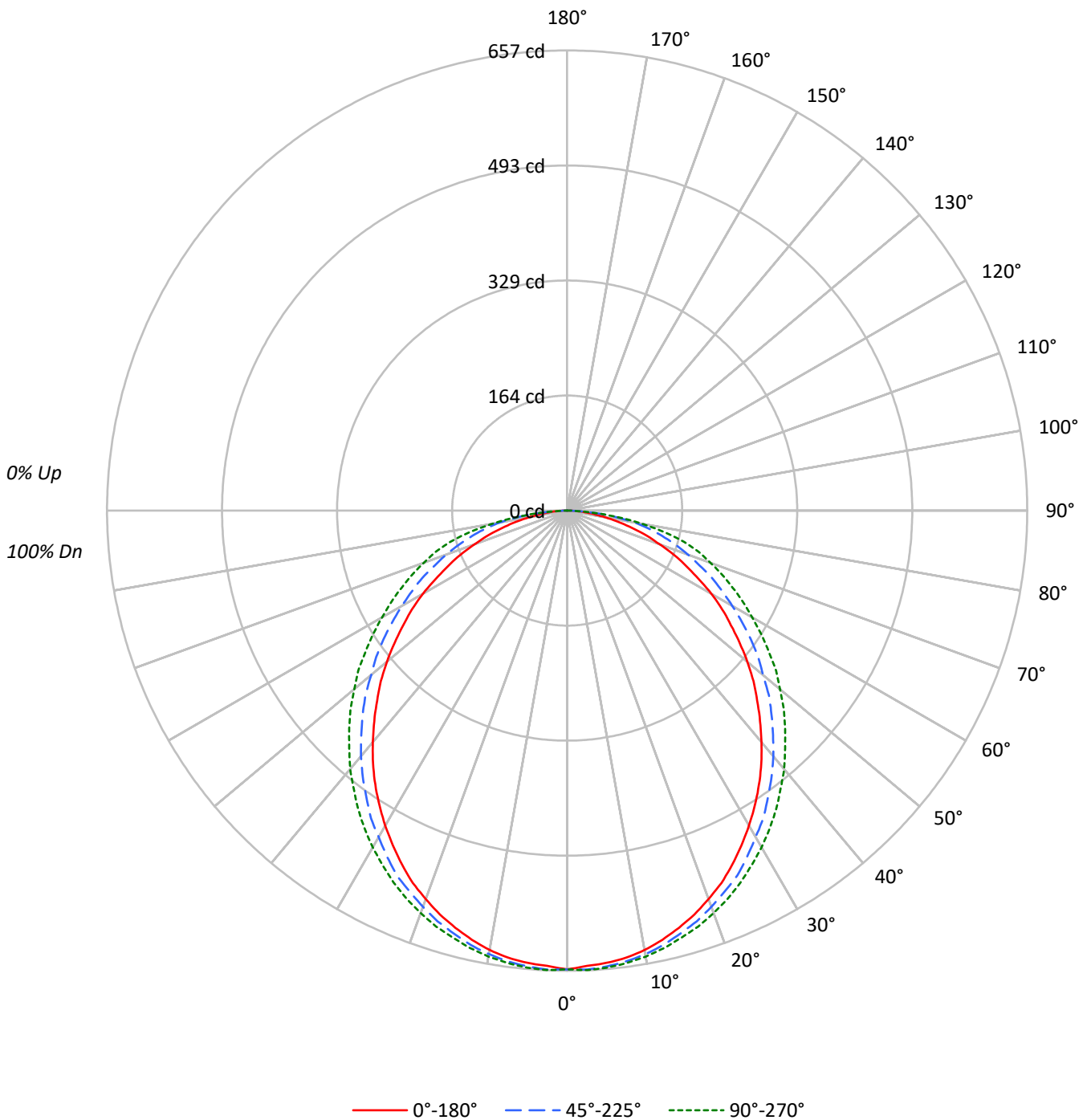
Lumens per Lamp: N/A
Luminaire Lumens: 1828.0 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 17.9
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: P272013
CATALOG NUMBER: 22CZ2-20-S-UNV-L930-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P272013

CATALOG NUMBER: 22CZ2-20-S-UNV-L930-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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	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	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1763	1763	1763
5°	1751	1765	1769
10°	1741	1757	1767
15°	1718	1742	1758
20°	1690	1724	1751
25°	1656	1707	1740
30°	1614	1672	1725
35°	1569	1642	1709
40°	1516	1609	1693
45°	1461	1571	1675
50°	1407	1528	1660
55°	1340	1500	1649
60°	1281	1464	1643
65°	1195	1456	1662
70°	1101	1443	1711
75°	993	1463	1800
80°	859	1506	1692
85°	710	1263	1263



TEST NUMBER: P272013

CATALOG NUMBER: 22CZ2-20-S-UNV-L930-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.9	3.4
10°-20°	176.3	9.6
20°-30°	263.8	14.4
30°-40°	312.4	17.1
40°-50°	318.3	17.4
50°-60°	285.3	15.6
60°-70°	223.4	12.2
70°-80°	144.0	7.9
80°-90°	42.5	2.3
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°	502.0	27.5
0°-40°	814.4	44.5
0°-60°	1418.0	77.6
0°-90°	1828.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1828.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	648	650	653	654	655	62
15°	617	620	625	630	631	174
25°	558	563	575	582	586	257
35°	478	484	500	515	520	299
45°	384	392	413	434	440	296
55°	286	295	320	342	351	256
65°	188	199	229	251	261	186
75°	96	110	141	165	173	102
85°	23	32	41	41	41	27
90°	0	0	0	0	0	



TEST NUMBER: P272013

CATALOG NUMBER: 22CZ2-20-S-UNV-L930-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	655.0	655.0	655.0	655.0	655.0
2.5°	650.8	652.5	655.9	656.7	656.7
5°	648.2	649.9	653.3	654.2	655.0
7.5°	643.9	644.8	649.1	650.8	651.6
10°	637.1	638.8	643.1	645.6	646.5
12.5°	627.7	630.3	635.4	638.8	639.7
15°	616.6	620.1	625.2	630.3	631.1
17.5°	604.7	608.1	614.9	620.9	622.6
20°	590.2	594.5	602.1	609.0	611.5
22.5°	575.7	579.1	588.5	597.0	599.6
25°	557.8	562.9	574.9	582.5	585.9
27.5°	539.0	545.0	556.9	567.2	570.6
30°	519.4	525.4	538.2	551.0	555.2
32.5°	498.9	505.8	521.1	533.9	538.2
35°	477.6	483.6	499.8	515.2	520.3
37.5°	455.5	460.6	479.3	495.5	500.7
40°	431.6	438.4	458.0	476.8	481.9
42.5°	407.7	415.4	435.0	455.5	460.6
45°	383.8	392.3	412.8	434.1	440.1
47.5°	360.8	367.6	390.6	411.1	419.6
50°	336.0	342.9	365.0	388.1	396.6
52.5°	310.5	319.8	343.7	365.9	376.1
55°	285.7	295.1	319.8	342.0	351.4
57.5°	262.7	270.4	296.0	319.0	328.4
60°	238.0	244.8	272.1	296.8	305.3
62.5°	211.5	221.8	249.9	272.9	283.2
65°	187.6	198.7	228.6	250.8	261.0
67.5°	165.5	175.7	204.7	228.6	239.7
70°	139.9	153.5	183.4	207.3	217.5
72.5°	119.4	131.3	162.1	185.9	197.0
75°	95.5	110.0	140.7	164.6	173.1
77.5°	75.9	90.4	119.4	138.2	142.4
80°	55.4	69.9	97.2	106.6	109.2
82.5°	37.5	51.2	69.9	72.5	73.3
85°	23.0	31.6	40.9	40.9	40.9
87.5°	11.1	12.8	14.5	13.6	13.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)