

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: P272017

Luminaire Tested: **22CZ2-24HE-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: P272017  
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: 22CZ2-24HE-S-UNV-L930-CD1-U  
Description: 2'X2' TROFFER LED MODULE,SMOOTH LENS, 90CRI  
Light Source: (112) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2102.3 lumens  
Efficiency: N/A  
Efficacy: 109.5 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

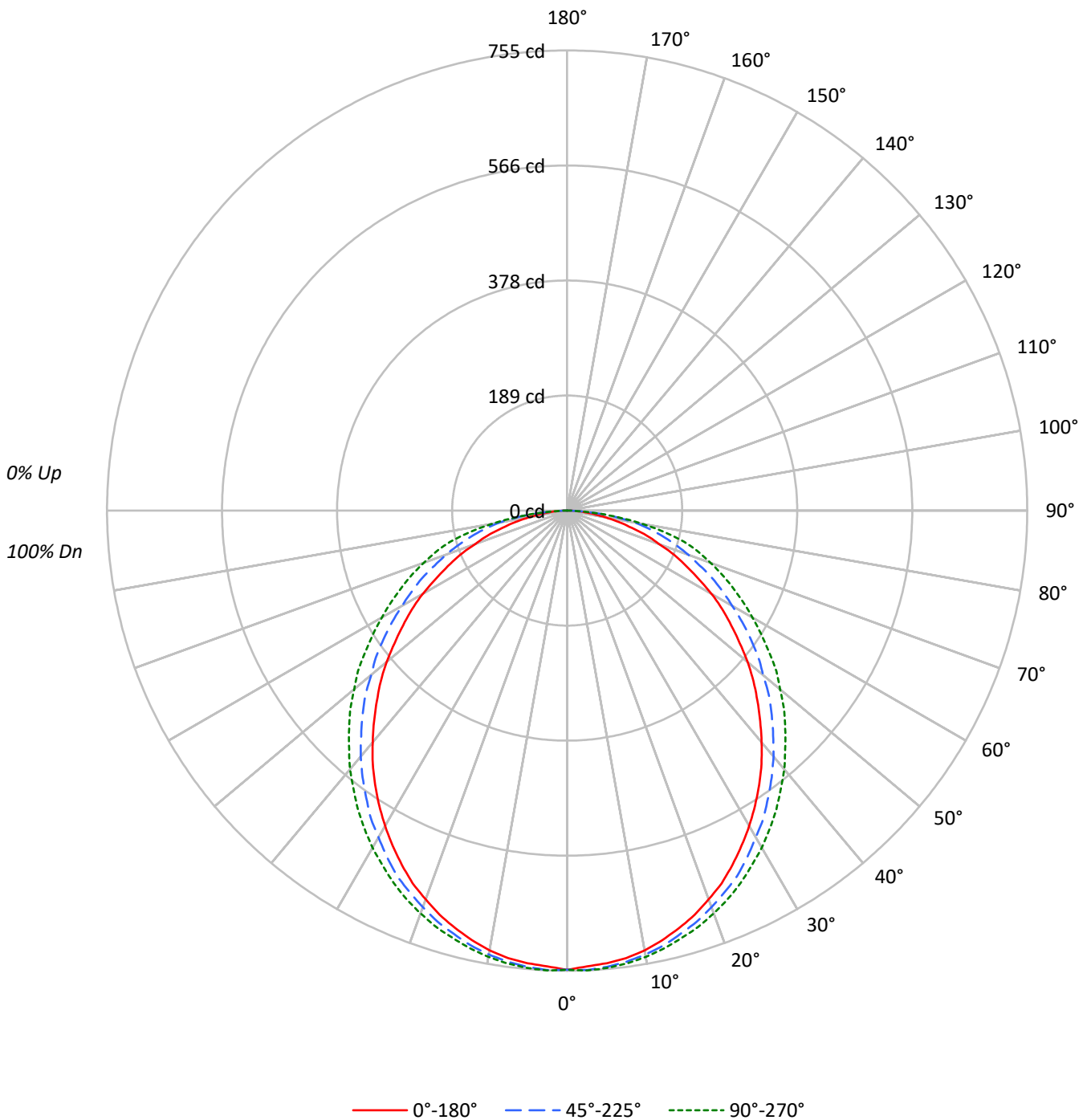
Input Watts (W): 19.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P272017

CATALOG NUMBER: 22CZ2-24HE-S-UNV-L930-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P272017

CATALOG NUMBER: 22CZ2-24HE-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°	2027	2027	2027
5°	2014	2030	2035
10°	2002	2021	2032
15°	1976	2003	2022
20°	1944	1983	2014
25°	1905	1963	2001
30°	1856	1923	1984
35°	1804	1888	1965
40°	1743	1850	1947
45°	1680	1807	1926
50°	1618	1757	1909
55°	1542	1726	1896
60°	1473	1684	1890
65°	1374	1674	1911
70°	1266	1659	1968
75°	1143	1682	2070
80°	989	1733	1946
85°	818	1454	1454



TEST NUMBER: P272017

CATALOG NUMBER: 22CZ2-24HE-S-UNV-L930-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.2	3.4
10°-20°	202.7	9.6
20°-30°	303.3	14.4
30°-40°	359.2	17.1
40°-50°	366.1	17.4
50°-60°	328.1	15.6
60°-70°	256.9	12.2
70°-80°	165.7	7.9
80°-90°	48.9	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°	577.3	27.5
0°-40°	936.6	44.5
0°-60°	1630.8	77.6
0°-90°	2102.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2102.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	753	753	753	753	753	
5°	746	747	751	752	753	71
15°	709	713	719	725	726	200
25°	642	647	661	670	674	295
35°	549	556	575	592	598	343
45°	441	451	475	499	506	341
55°	329	339	368	393	404	295
65°	216	228	263	288	300	214
75°	110	126	162	189	199	118
85°	26	36	47	47	47	31
90°	0	0	0	0	0	



TEST NUMBER: P272017

CATALOG NUMBER: 22CZ2-24HE-S-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	753.3	753.3	753.3	753.3	753.3
2.5°	748.4	750.4	754.3	755.3	755.3
5°	745.5	747.4	751.4	752.3	753.3
7.5°	740.6	741.5	746.5	748.4	749.4
10°	732.7	734.7	739.6	742.5	743.5
12.5°	721.9	724.9	730.8	734.7	735.7
15°	709.2	713.1	719.0	724.9	725.9
17.5°	695.4	699.4	707.2	714.1	716.0
20°	678.8	683.7	692.5	700.4	703.3
22.5°	662.1	666.0	676.8	686.6	689.6
25°	641.5	647.4	661.1	669.9	673.9
27.5°	619.9	626.8	640.5	652.3	656.2
30°	597.4	604.2	618.9	633.7	638.6
32.5°	573.8	581.7	599.3	614.0	618.9
35°	549.3	556.2	574.8	592.5	598.3
37.5°	523.8	529.7	551.3	569.9	575.8
40°	496.3	504.2	526.7	548.3	554.2
42.5°	468.9	477.7	500.3	523.8	529.7
45°	441.4	451.2	474.7	499.3	506.1
47.5°	414.9	422.8	449.2	472.8	482.6
50°	386.5	394.3	419.8	446.3	456.1
52.5°	357.0	367.8	395.3	420.8	432.6
55°	328.6	339.4	367.8	393.3	404.1
57.5°	302.1	310.9	340.4	366.9	377.6
60°	273.7	281.5	312.9	341.3	351.2
62.5°	243.3	255.0	287.4	313.9	325.7
65°	215.8	228.5	262.9	288.4	300.2
67.5°	190.3	202.1	235.4	262.9	275.6
70°	160.9	176.6	210.9	238.4	250.1
72.5°	137.3	151.1	186.4	213.8	226.6
75°	109.9	126.5	161.8	189.3	199.1
77.5°	87.3	104.0	137.3	158.9	163.8
80°	63.8	80.4	111.8	122.6	125.6
82.5°	43.2	58.9	80.4	83.4	84.4
85°	26.5	36.3	47.1	47.1	47.1
87.5°	12.8	14.7	16.7	15.7	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)