

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: P271969

Luminaire Tested: **22CZ2-20-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: P271969  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20-UNV-L930-CD1-U  
Description: 2'X2' TROFFER LED MODULE,RIBBED 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: 1734.0 lumens  
Efficiency: N/A  
Efficacy: 96.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

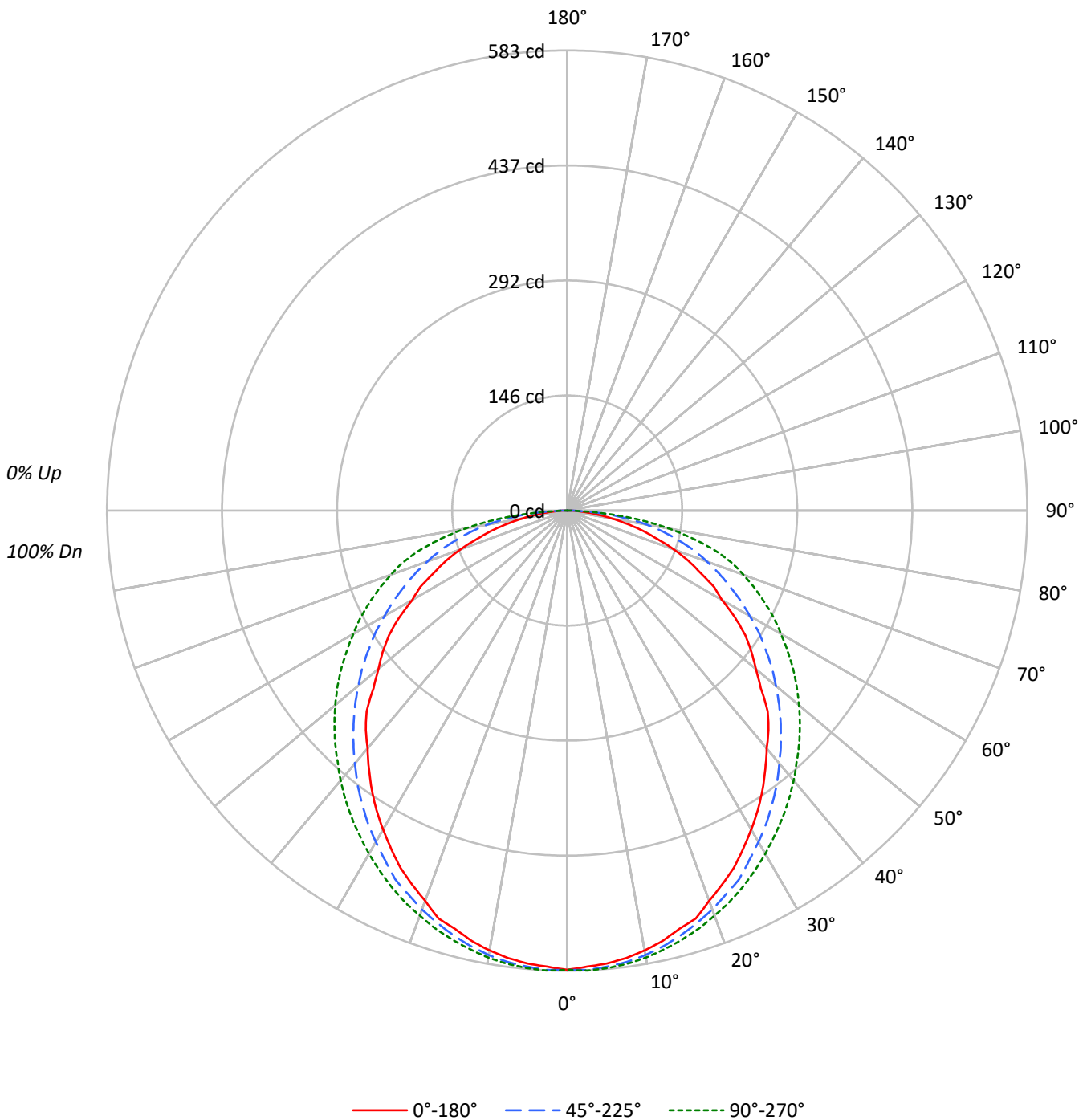
Input Watts (W): 17.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**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	90	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	59	56
4	81	69	60	53	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	51	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°	1566	1566	1566
5°	1556	1567	1572
10°	1547	1562	1571
15°	1528	1551	1568
20°	1507	1540	1564
25°	1483	1530	1562
30°	1449	1506	1560
35°	1418	1488	1562
40°	1382	1469	1568
45°	1368	1456	1582
50°	1306	1445	1605
55°	1293	1441	1639
60°	1220	1438	1684
65°	1184	1448	1760
70°	1136	1482	1868
75°	1036	1527	2011
80°	888	1582	2032
85°	716	1513	1741



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.1	3.2
10°-20°	157.0	9.1
20°-30°	236.4	13.6
30°-40°	283.7	16.4
40°-50°	296.5	17.1
50°-60°	276.3	15.9
60°-70°	226.6	13.1
70°-80°	152.7	8.8
80°-90°	49.7	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°	448.4	25.9
0°-40°	732.1	42.2
0°-60°	1304.9	75.3
0°-90°	1734.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1734.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	582	582	582	582	582	
5°	576	578	580	581	582	55
15°	549	552	557	562	563	155
25°	500	503	515	523	526	230
35°	432	437	453	469	476	270
45°	359	362	383	406	416	275
55°	276	280	307	336	349	244
65°	186	194	227	261	276	185
75°	100	110	147	180	193	105
85°	23	33	49	57	56	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	581.8	581.8	581.8	581.8	581.8
2.5°	578.5	580.1	582.6	583.4	583.4
5°	576.0	577.6	580.1	580.9	581.8
7.5°	571.8	573.5	576.8	578.5	579.3
10°	566.0	567.7	571.8	574.3	575.1
12.5°	558.5	560.2	565.2	568.5	569.3
15°	548.6	551.9	556.9	561.9	562.7
17.5°	541.9	541.1	547.7	553.6	555.2
20°	526.2	530.3	537.8	544.4	546.1
22.5°	512.9	516.2	526.2	533.6	537.0
25°	499.6	502.9	515.4	522.8	526.2
27.5°	483.0	488.0	499.6	510.4	514.5
30°	466.4	471.4	484.7	497.1	502.1
32.5°	449.8	455.6	469.7	483.0	488.8
35°	431.6	437.4	453.1	468.9	475.5
37.5°	412.5	419.9	436.5	454.0	461.4
40°	393.4	400.8	418.3	438.2	446.5
42.5°	377.6	380.9	400.8	422.4	430.7
45°	359.4	361.8	382.6	405.8	415.8
47.5°	332.8	341.9	364.3	390.1	400.0
50°	312.0	322.0	345.2	372.6	383.4
52.5°	294.6	301.3	327.0	354.4	366.8
55°	275.5	280.5	307.1	336.1	349.4
57.5°	252.3	261.4	288.0	317.9	331.1
60°	226.6	238.2	267.2	299.6	312.9
62.5°	210.0	216.6	248.1	280.5	295.5
65°	185.9	194.2	227.4	260.6	276.4
67.5°	166.0	174.3	208.3	241.5	257.3
70°	144.4	152.7	188.4	221.6	237.4
72.5°	119.5	131.1	168.5	201.7	218.3
75°	99.6	110.4	146.9	180.1	193.4
77.5°	77.2	91.3	125.3	152.7	162.7
80°	57.3	71.4	102.1	122.0	131.1
82.5°	39.0	53.1	76.4	91.3	96.3
85°	23.2	33.2	49.0	57.3	56.4
87.5°	10.8	14.1	19.9	19.9	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)