

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: P271979

Luminaire Tested: **22CZ2-24-UNV-L940-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: P271979  
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: 22CZ2-24-UNV-L940-CD1-U  
Description: 2'X2' TROFFER LED MODULE,RIBBED LENS, 90CRI  
Light Source: (56) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2093.0 lumens  
Efficiency: N/A  
Efficacy: 95.6 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

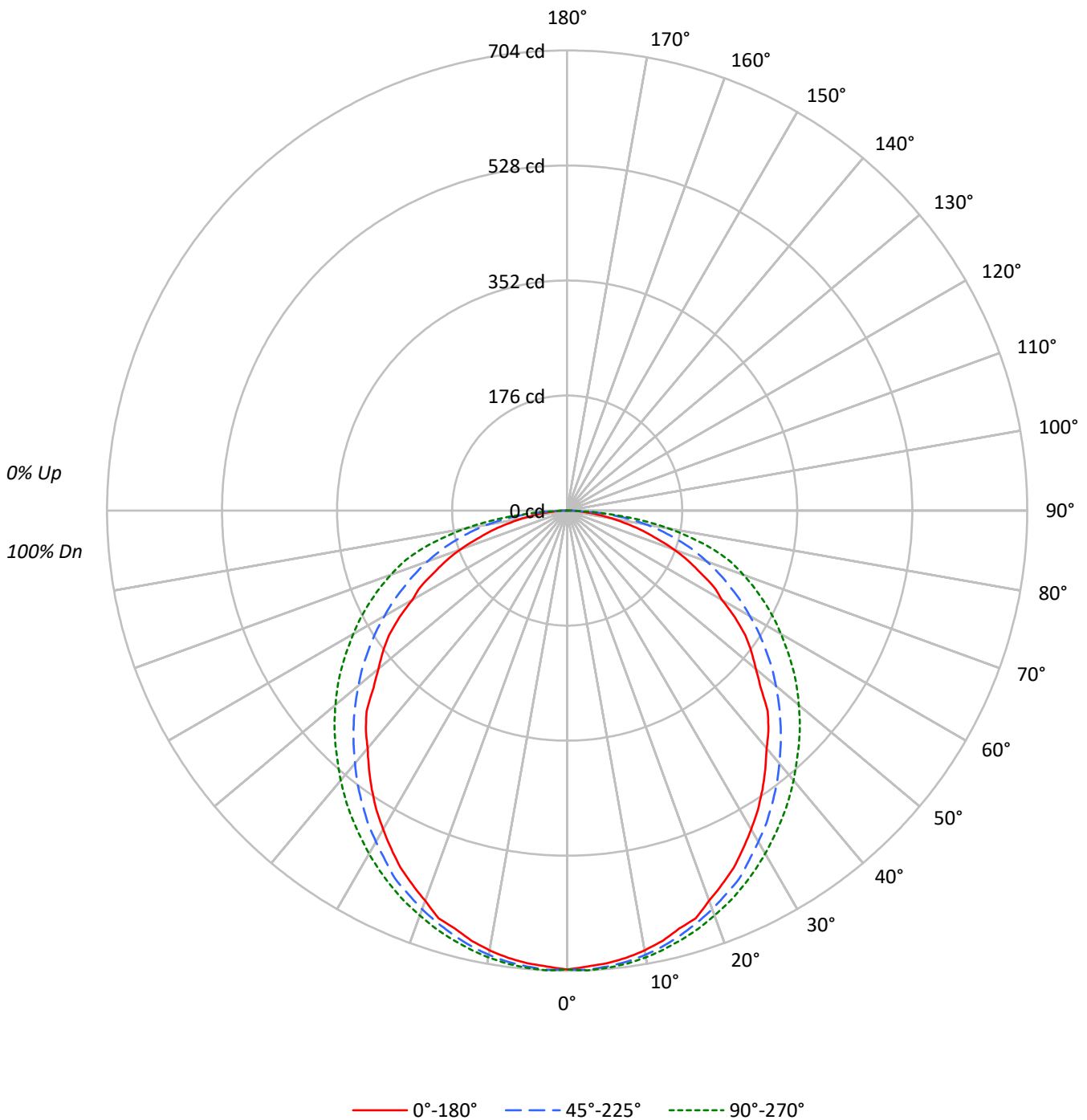
Input Watts (W): 21.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1890	1890	1890
5°	1878	1891	1897
10°	1867	1886	1897
15°	1845	1873	1892
20°	1819	1859	1887
25°	1790	1847	1886
30°	1749	1818	1883
35°	1711	1797	1886
40°	1668	1774	1893
45°	1651	1757	1910
50°	1577	1744	1937
55°	1560	1739	1978
60°	1472	1736	2033
65°	1429	1748	2124
70°	1371	1789	2254
75°	1250	1843	2427
80°	1071	1909	2453
85°	865	1825	2103



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.4	3.2
10°-20°	189.6	9.1
20°-30°	285.3	13.6
30°-40°	342.4	16.4
40°-50°	357.9	17.1
50°-60°	333.5	15.9
60°-70°	273.5	13.1
70°-80°	184.3	8.8
80°-90°	60.0	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°	541.3	25.9
0°-40°	883.7	42.2
0°-60°	1575.1	75.3
0°-90°	2093.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2093.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	695	697	700	701	702	66
15°	662	666	672	678	679	187
25°	603	607	622	631	635	277
35°	521	528	547	566	574	326
45°	434	437	462	490	502	331
55°	333	339	371	406	422	295
65°	224	234	274	314	334	223
75°	120	133	177	217	233	126
85°	28	40	59	69	68	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	702.2	702.2	702.2	702.2	702.2
2.5°	698.2	700.2	703.2	704.2	704.2
5°	695.2	697.2	700.2	701.2	702.2
7.5°	690.2	692.2	696.2	698.2	699.2
10°	683.2	685.2	690.2	693.2	694.2
12.5°	674.2	676.2	682.2	686.2	687.2
15°	662.1	666.2	672.2	678.2	679.2
17.5°	654.1	653.1	661.1	668.2	670.2
20°	635.1	640.1	649.1	657.1	659.1
22.5°	619.1	623.1	635.1	644.1	648.1
25°	603.0	607.1	622.1	631.1	635.1
27.5°	583.0	589.0	603.0	616.1	621.1
30°	563.0	569.0	585.0	600.0	606.1
32.5°	542.9	550.0	567.0	583.0	590.0
35°	520.9	527.9	546.9	566.0	574.0
37.5°	497.9	506.9	526.9	548.0	557.0
40°	474.8	483.8	504.9	528.9	538.9
42.5°	455.8	459.8	483.8	509.9	519.9
45°	433.8	436.8	461.8	489.9	501.9
47.5°	401.7	412.7	439.8	470.8	482.8
50°	376.7	388.7	416.7	449.8	462.8
52.5°	355.6	363.6	394.7	427.7	442.8
55°	332.6	338.6	370.6	405.7	421.7
57.5°	304.5	315.5	347.6	383.7	399.7
60°	273.5	287.5	322.6	361.6	377.7
62.5°	253.4	261.5	299.5	338.6	356.6
65°	224.4	234.4	274.5	314.5	333.6
67.5°	200.3	210.4	251.4	291.5	310.5
70°	174.3	184.3	227.4	267.5	286.5
72.5°	144.3	158.3	203.4	243.4	263.5
75°	120.2	133.2	177.3	217.4	233.4
77.5°	93.2	110.2	151.3	184.3	196.3
80°	69.1	86.1	123.2	147.3	158.3
82.5°	47.1	64.1	92.2	110.2	116.2
85°	28.0	40.1	59.1	69.1	68.1
87.5°	13.0	17.0	24.0	24.0	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)