

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: P294838

Luminaire Tested: **22CZ2-24-HRP-UNV-L950-CD1-U**

Issue Date: 12/2/2019

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: P294838  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-24-HRP-UNV-L950-CD1-U  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (56) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1788.8 lumens  
Efficiency: N/A  
Efficacy: 81.7 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

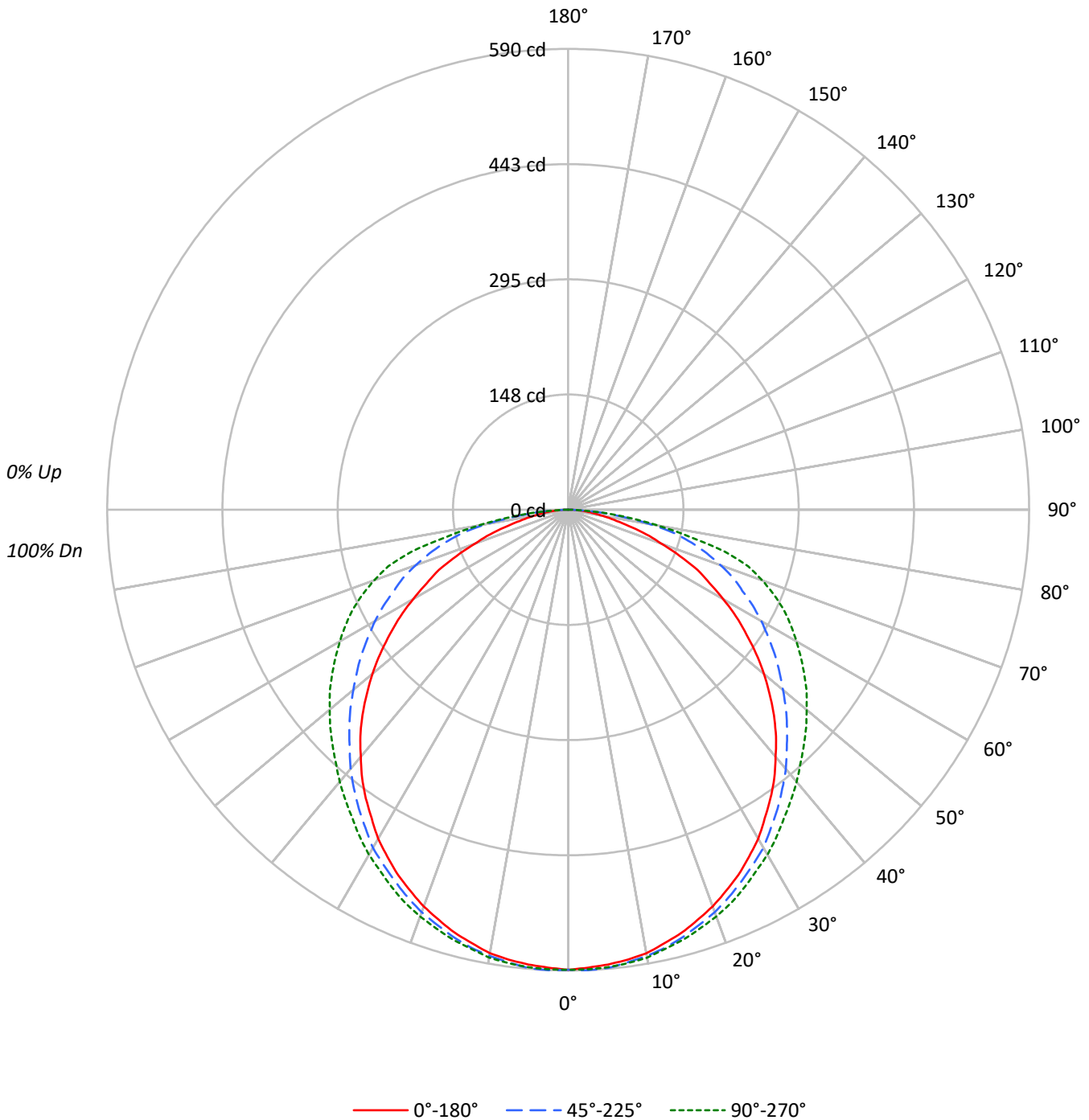
Input Watts (W): 21.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82				82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68				68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56				56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48				48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36				36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31				31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28				28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25				25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23				23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1585	1585	1585
5°	1579	1591	1588
10°	1576	1585	1591
15°	1562	1578	1588
20°	1548	1570	1587
25°	1531	1558	1585
30°	1511	1553	1585
35°	1483	1535	1583
40°	1451	1522	1598
45°	1417	1507	1623
50°	1370	1502	1667
55°	1308	1514	1731
60°	1233	1537	1816
65°	1164	1566	1940
70°	995	1633	2078
75°	833	1701	2158
80°	682	1644	1801
85°	593	1220	1325



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.8	3.1
10°-20°	159.7	8.9
20°-30°	242.0	13.5
30°-40°	292.2	16.3
40°-50°	307.1	17.2
50°-60°	288.9	16.2
60°-70°	240.9	13.5
70°-80°	159.6	8.9
80°-90°	42.5	2.4
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°	457.5	25.6
0°-40°	749.8	41.9
0°-60°	1345.7	75.2
0°-90°	1788.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1788.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	589	589	589	589	589	
5°	584	586	589	589	588	56
15°	561	563	566	569	570	158
25°	516	519	525	532	534	237
35°	451	456	467	477	482	282
45°	372	378	396	416	426	287
55°	279	291	323	356	369	249
65°	183	199	246	287	305	178
75°	80	112	164	198	208	87
85°	19	29	40	43	43	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	589.0	589.0	589.0	589.0	589.0
2.5°	586.8	587.9	590.2	590.2	589.0
5°	584.5	585.6	589.0	589.0	587.9
7.5°	581.1	582.3	584.5	586.8	585.6
10°	576.6	577.8	580.0	582.3	582.3
12.5°	568.7	569.9	574.4	575.5	575.5
15°	560.8	563.1	566.5	568.7	569.9
17.5°	550.7	552.9	557.4	562.0	562.0
20°	540.5	542.8	548.4	552.9	554.1
22.5°	528.1	531.5	537.1	542.8	545.0
25°	515.7	519.1	524.7	531.5	533.7
27.5°	501.0	504.4	512.3	520.2	521.3
30°	486.3	489.7	499.9	506.7	510.0
32.5°	468.3	472.8	483.0	493.1	496.5
35°	451.4	455.9	467.2	477.3	481.8
37.5°	433.3	437.8	450.2	462.7	468.3
40°	413.0	418.6	433.3	446.9	454.8
42.5°	393.8	399.5	414.1	432.2	440.1
45°	372.4	378.0	396.1	416.4	426.5
47.5°	349.8	356.6	378.0	402.8	413.0
50°	327.2	335.1	358.8	387.0	398.3
52.5°	303.5	313.7	340.8	371.2	384.8
55°	278.7	291.1	322.7	355.5	369.0
57.5°	255.0	266.3	303.5	338.5	353.2
60°	229.1	243.7	285.5	321.6	337.4
62.5°	204.2	220.0	266.3	304.7	321.6
65°	182.8	198.6	246.0	286.6	304.7
67.5°	154.6	176.0	229.1	267.4	285.5
70°	126.4	155.7	207.6	247.1	264.1
72.5°	104.9	133.2	186.2	225.7	241.5
75°	80.1	111.7	163.6	197.5	207.6
77.5°	59.8	92.5	139.9	156.9	158.0
80°	44.0	71.1	106.1	111.7	116.2
82.5°	30.5	49.7	68.8	75.6	77.9
85°	19.2	29.3	39.5	42.9	42.9
87.5°	10.2	11.3	13.5	13.5	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)