

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: P475168

Luminaire Tested: **22CZ2-24-HRP-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475168  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-24-HRP-UNV-L840-CD1-U  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

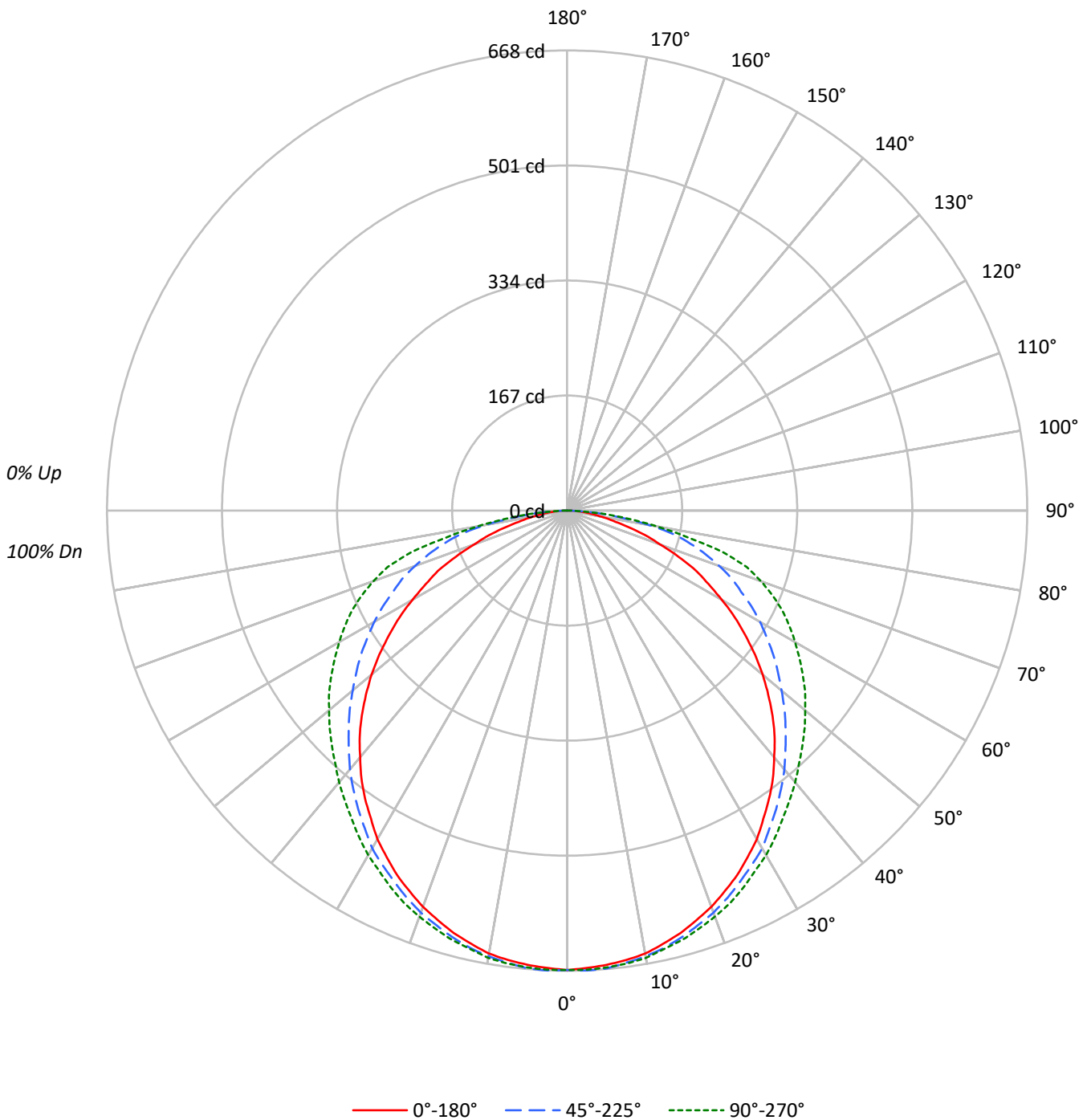
Lumens per Lamp: N/A  
Luminaire Lumens: 2025.6 lumens  
Efficiency: N/A  
Efficacy: 109.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 18.5  
Input Voltage (V): 120  
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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

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

	0°	45°	90°
0°	1795	1795	1795
5°	1788	1802	1798
10°	1784	1795	1802
15°	1769	1787	1798
20°	1753	1778	1796
25°	1734	1764	1795
30°	1711	1759	1795
35°	1679	1738	1792
40°	1643	1724	1809
45°	1605	1707	1838
50°	1551	1701	1888
55°	1481	1715	1961
60°	1396	1740	2056
65°	1318	1774	2197
70°	1126	1850	2353
75°	944	1927	2444
80°	773	1861	2039
85°	670	1380	1497



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.2	3.1
10°-20°	180.8	8.9
20°-30°	274.1	13.5
30°-40°	330.9	16.3
40°-50°	347.7	17.2
50°-60°	327.2	16.2
60°-70°	272.8	13.5
70°-80°	180.7	8.9
80°-90°	48.2	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°	518.1	25.6
0°-40°	849.0	41.9
0°-60°	1523.9	75.2
0°-90°	2025.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2025.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	667	667	667	667	667	
5°	662	663	667	667	666	63
15°	635	638	642	644	645	179
25°	584	588	594	602	604	269
35°	511	516	529	540	546	320
45°	422	428	449	472	483	325
55°	316	330	366	402	418	282
65°	207	225	279	324	345	201
75°	91	126	185	224	235	99
85°	22	33	45	48	48	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	667.0	667.0	667.0	667.0	667.0
2.5°	664.5	665.7	668.3	668.3	667.0
5°	661.9	663.1	667.0	667.0	665.7
7.5°	658.0	659.4	661.9	664.5	663.1
10°	653.0	654.2	656.8	659.4	659.4
12.5°	644.1	645.3	650.4	651.7	651.7
15°	635.0	637.6	641.5	644.1	645.3
17.5°	623.6	626.1	631.2	636.4	636.4
20°	612.1	614.6	621.0	626.1	627.3
22.5°	598.0	601.8	608.3	614.6	617.2
25°	584.0	587.8	594.2	601.8	604.4
27.5°	567.3	571.1	580.2	589.1	590.3
30°	550.7	554.5	566.1	573.7	577.6
32.5°	530.3	535.3	546.9	558.4	562.2
35°	511.1	516.3	529.0	540.5	545.6
37.5°	490.7	495.7	509.8	524.0	530.3
40°	467.6	474.1	490.7	506.0	514.9
42.5°	446.0	452.4	469.0	489.4	498.3
45°	421.7	428.0	448.6	471.5	483.0
47.5°	396.1	403.7	428.0	456.2	467.6
50°	370.6	379.5	406.3	438.3	451.0
52.5°	343.7	355.2	385.9	420.5	435.7
55°	315.6	329.7	365.5	402.5	417.9
57.5°	288.7	301.6	343.7	383.3	399.9
60°	259.4	276.0	323.3	364.1	382.1
62.5°	231.3	249.2	301.6	345.1	364.1
65°	207.0	224.8	278.6	324.5	345.1
67.5°	175.1	199.3	259.4	302.8	323.3
70°	143.1	176.3	235.1	279.8	299.0
72.5°	118.9	150.8	210.8	255.5	273.5
75°	90.8	126.5	185.3	223.6	235.1
77.5°	67.7	104.7	158.5	177.7	178.9
80°	49.9	80.5	120.1	126.5	131.6
82.5°	34.5	56.2	78.0	85.6	88.2
85°	21.7	33.2	44.7	48.5	48.5
87.5°	11.5	12.8	15.4	15.4	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)