

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: P474291

Luminaire Tested: **24CZ2-85VHE-RDP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474291  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-85VHE-RDP-UNV-L840-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ RDP  
INSERT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5797.8 lumens  
Efficiency: N/A  
Efficacy: 97.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

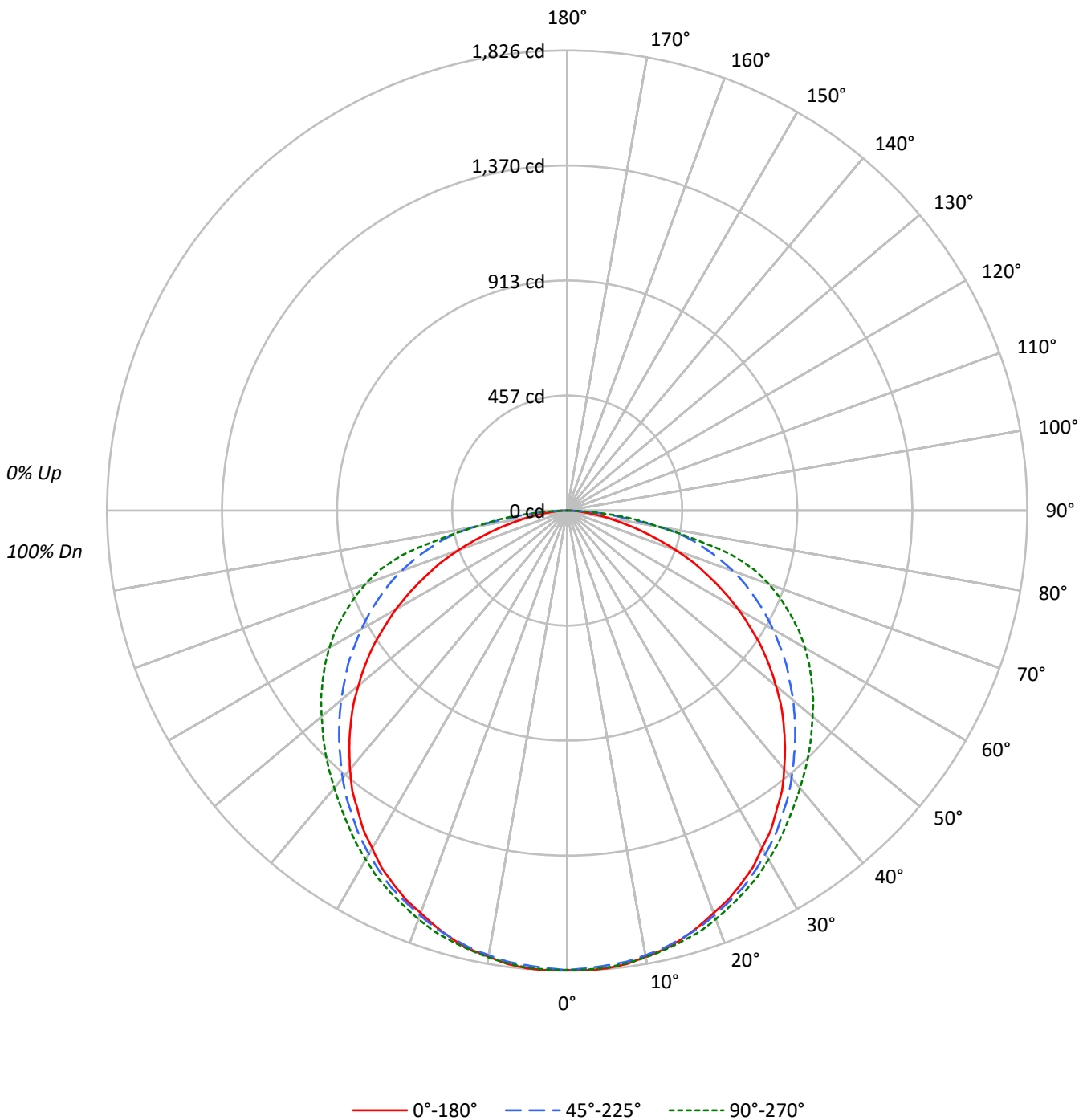
Input Watts (W): 59.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	2453	2453	2453
5°	2463	2447	2459
10°	2456	2448	2460
15°	2452	2448	2464
20°	2434	2446	2471
25°	2425	2451	2476
30°	2404	2444	2484
35°	2381	2437	2494
40°	2354	2434	2525
45°	2315	2435	2582
50°	2263	2450	2661
55°	2206	2489	2780
60°	2113	2538	2933
65°	1978	2627	3113
70°	1799	2749	3348
75°	1524	2900	3499
80°	1204	2918	2829
85°	888	2221	2487



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	173.0	3.0
10°-20°	497.8	8.6
20°-30°	761.2	13.1
30°-40°	930.5	16.0
40°-50°	991.8	17.1
50°-60°	948.2	16.4
60°-70°	803.3	13.9
70°-80°	539.9	9.3
80°-90°	152.3	2.6
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°	1431.9	24.7
0°-40°	2362.4	40.7
0°-60°	4302.4	74.2
0°-90°	5797.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5797.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1823	1823	1823	1823	1823	
5°	1823	1820	1812	1820	1820	173
15°	1760	1760	1757	1772	1769	496
25°	1633	1639	1651	1665	1668	753
35°	1449	1461	1484	1513	1518	908
45°	1216	1237	1280	1334	1357	938
55°	940	975	1061	1145	1185	838
65°	621	684	825	934	978	617
75°	293	400	558	653	673	314
85°	58	118	144	155	161	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1823.3	1823.3	1823.3	1823.3	1823.3
2.5°	1826.2	1826.2	1817.6	1823.3	1823.3
5°	1823.3	1820.5	1811.8	1820.5	1820.5
7.5°	1814.7	1811.8	1806.1	1814.7	1811.8
10°	1797.4	1797.4	1791.7	1800.3	1800.3
12.5°	1783.1	1780.2	1777.3	1788.8	1785.9
15°	1760.0	1760.0	1757.2	1771.5	1768.7
17.5°	1731.3	1734.1	1737.0	1748.5	1751.4
20°	1699.6	1705.4	1708.2	1725.5	1725.5
22.5°	1670.8	1673.7	1679.5	1696.7	1696.7
25°	1633.4	1639.2	1650.7	1665.1	1668.0
27.5°	1596.0	1598.9	1613.3	1633.4	1636.3
30°	1547.1	1555.8	1573.0	1596.0	1598.9
32.5°	1504.0	1512.6	1532.7	1555.8	1561.5
35°	1449.3	1460.8	1483.8	1512.6	1518.3
37.5°	1400.4	1409.0	1437.8	1469.4	1478.1
40°	1340.2	1357.2	1386.0	1423.4	1437.8
42.5°	1279.8	1297.1	1331.6	1380.2	1397.5
45°	1216.5	1236.7	1279.8	1334.5	1357.2
47.5°	1153.2	1176.2	1225.2	1288.5	1314.3
50°	1081.3	1110.1	1170.5	1242.4	1271.2
52.5°	1012.2	1046.8	1112.9	1193.5	1230.9
55°	940.3	974.8	1061.1	1144.6	1184.9
57.5°	859.7	905.8	1000.7	1095.7	1138.8
60°	785.2	828.1	943.2	1046.8	1089.9
62.5°	704.6	762.2	885.6	995.0	1038.1
65°	621.2	684.5	825.2	934.5	977.7
67.5°	546.4	615.5	765.1	874.1	917.3
70°	457.2	543.5	698.9	807.9	851.1
72.5°	373.8	468.7	629.8	736.3	776.6
75°	293.2	399.7	557.9	652.9	673.0
77.5°	218.7	330.6	483.1	523.4	509.0
80°	155.4	264.7	376.6	356.5	365.1
82.5°	100.7	201.4	233.1	264.7	273.1
85°	57.5	118.0	143.9	155.4	161.1
87.5°	25.9	43.2	57.5	57.5	54.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)