

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: P474192

Luminaire Tested: **24CZ2-90VHE-RDP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474192  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-90VHE-RDP-UNV-L830-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ RDP  
INSERT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5870.1 lumens  
Efficiency: N/A  
Efficacy: 91.6 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

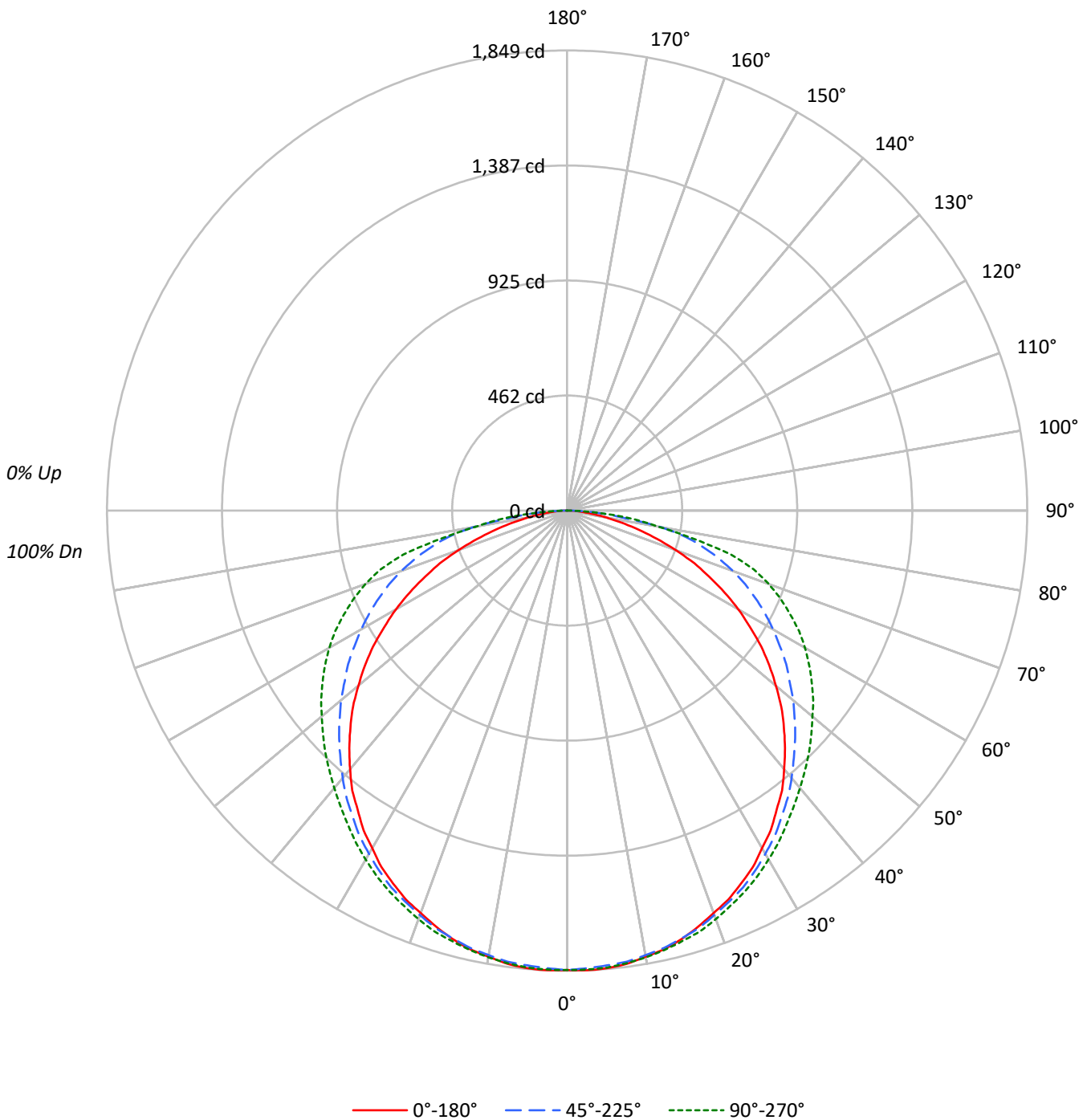
Input Watts (W): 64.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2484	2484	2484
5°	2493	2478	2489
10°	2486	2478	2490
15°	2482	2478	2494
20°	2464	2476	2501
25°	2455	2481	2507
30°	2434	2474	2515
35°	2410	2468	2525
40°	2383	2465	2557
45°	2344	2466	2615
50°	2292	2481	2694
55°	2233	2520	2814
60°	2139	2570	2969
65°	2003	2660	3152
70°	1821	2784	3390
75°	1543	2937	3542
80°	1219	2954	2865
85°	900	2249	2518



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.1	3.0
10°-20°	504.0	8.6
20°-30°	770.7	13.1
30°-40°	942.1	16.0
40°-50°	1004.1	17.1
50°-60°	960.1	16.4
60°-70°	813.3	13.9
70°-80°	546.6	9.3
80°-90°	154.2	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°	1449.7	24.7
0°-40°	2391.8	40.7
0°-60°	4356.0	74.2
0°-90°	5870.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5870.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1846	1846	1846	1846	1846	
5°	1846	1843	1834	1843	1843	175
15°	1782	1782	1779	1794	1791	502
25°	1654	1660	1671	1686	1689	762
35°	1467	1479	1502	1532	1537	919
45°	1232	1252	1296	1351	1374	950
55°	952	987	1074	1159	1200	848
65°	629	693	836	946	990	624
75°	297	405	565	661	681	318
85°	58	119	146	157	163	72
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1846.1	1846.1	1846.1	1846.1	1846.1
2.5°	1849.0	1849.0	1840.2	1846.1	1846.1
5°	1846.1	1843.2	1834.4	1843.2	1843.2
7.5°	1837.3	1834.4	1828.6	1837.3	1834.4
10°	1819.9	1819.9	1814.0	1822.8	1822.8
12.5°	1805.3	1802.4	1799.5	1811.1	1808.2
15°	1782.0	1782.0	1779.1	1793.6	1790.7
17.5°	1752.9	1755.8	1758.7	1770.3	1773.2
20°	1720.8	1726.6	1729.5	1747.0	1747.0
22.5°	1691.7	1694.6	1700.4	1717.9	1717.9
25°	1653.8	1659.6	1671.3	1685.8	1688.8
27.5°	1615.9	1618.8	1633.4	1653.8	1656.7
30°	1566.4	1575.1	1592.6	1615.9	1618.8
32.5°	1522.7	1531.5	1551.8	1575.1	1581.0
35°	1467.4	1479.0	1502.3	1531.5	1537.3
37.5°	1417.8	1426.6	1455.7	1487.8	1496.5
40°	1357.0	1374.1	1403.3	1441.1	1455.7
42.5°	1295.8	1313.3	1348.2	1397.4	1414.9
45°	1231.7	1252.1	1295.8	1351.1	1374.1
47.5°	1167.6	1190.9	1240.4	1304.5	1330.7
50°	1094.8	1123.9	1185.1	1257.9	1287.0
52.5°	1024.9	1059.8	1126.8	1208.4	1246.3
55°	952.0	987.0	1074.4	1158.9	1199.6
57.5°	870.5	917.1	1013.2	1109.3	1153.0
60°	795.0	838.4	954.9	1059.8	1103.5
62.5°	713.4	771.7	896.7	1007.4	1051.1
65°	629.0	693.0	835.5	946.2	989.9
67.5°	553.2	623.1	774.6	885.0	928.7
70°	462.9	550.3	707.6	818.0	861.7
72.5°	378.4	474.6	637.7	745.5	786.3
75°	296.9	404.6	564.9	661.0	681.4
77.5°	221.4	334.7	489.1	529.9	515.3
80°	157.3	268.0	381.3	360.9	369.7
82.5°	102.0	203.9	236.0	268.0	276.5
85°	58.3	119.4	145.7	157.3	163.1
87.5°	26.2	43.7	58.3	58.3	55.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)