

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: P474292

Luminaire Tested: **24CZ2-90VHE-RDP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474292  
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-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: 6198.6 lumens  
Efficiency: N/A  
Efficacy: 96.7 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

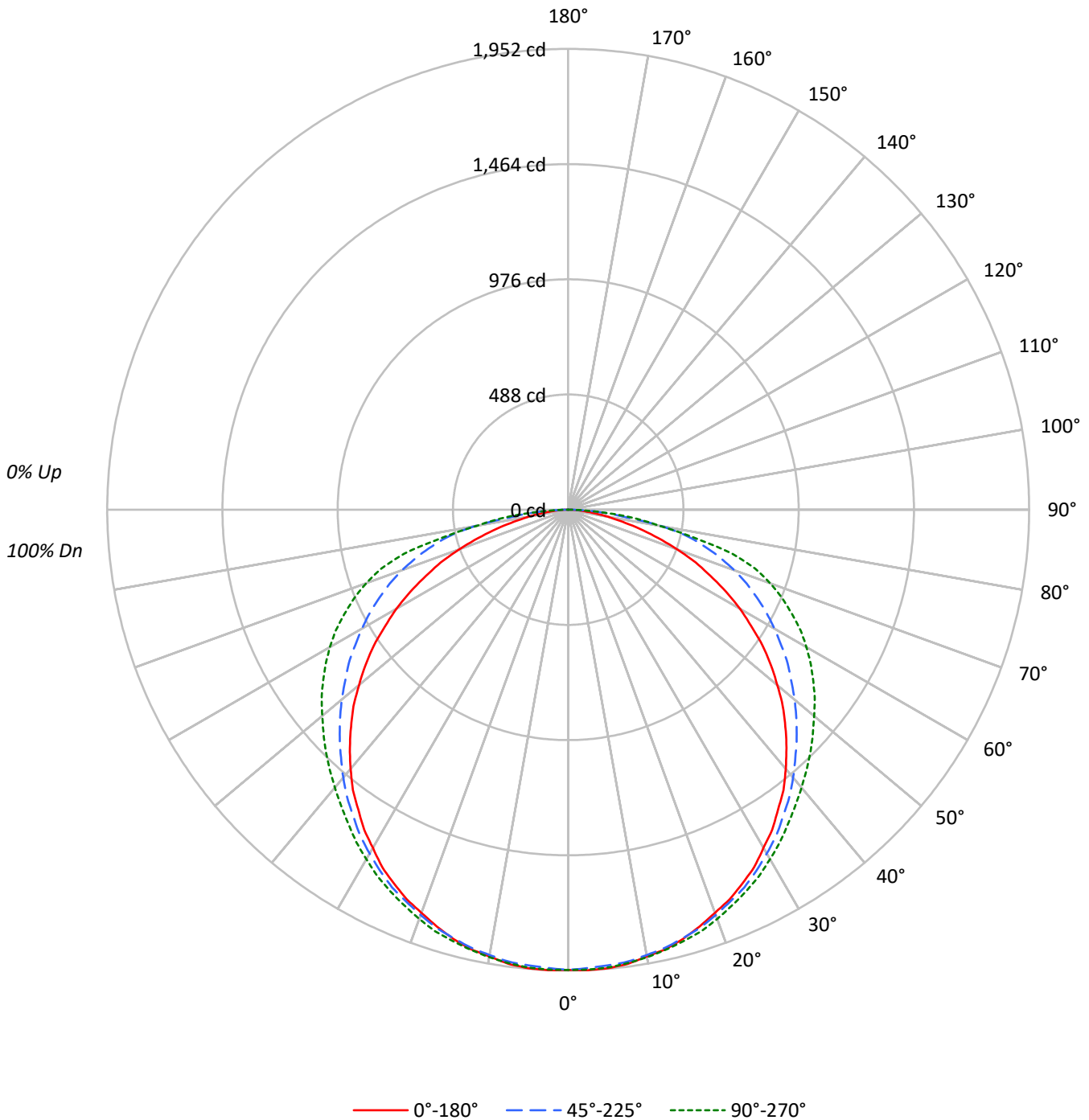
Input Watts (W): 64.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2623	2623	2623
5°	2633	2616	2629
10°	2626	2617	2630
15°	2621	2617	2634
20°	2602	2615	2641
25°	2593	2620	2647
30°	2570	2613	2656
35°	2545	2606	2666
40°	2517	2603	2700
45°	2475	2604	2761
50°	2420	2619	2845
55°	2358	2661	2972
60°	2259	2714	3136
65°	2114	2809	3328
70°	1923	2939	3579
75°	1630	3101	3740
80°	1287	3120	3025
85°	949	2374	2660



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.9	3.0
10°-20°	532.2	8.6
20°-30°	813.8	13.1
30°-40°	994.8	16.0
40°-50°	1060.3	17.1
50°-60°	1013.8	16.4
60°-70°	858.8	13.9
70°-80°	577.2	9.3
80°-90°	162.8	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°	1530.9	24.7
0°-40°	2525.7	40.7
0°-60°	4599.8	74.2
0°-90°	6198.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6198.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1949	1949	1949	1949	1949	
5°	1949	1946	1937	1946	1946	185
15°	1882	1882	1879	1894	1891	531
25°	1746	1752	1765	1780	1783	805
35°	1550	1562	1586	1617	1623	971
45°	1301	1322	1368	1427	1451	1003
55°	1005	1042	1134	1224	1267	895
65°	664	732	882	999	1045	659
75°	314	427	596	698	720	336
85°	62	126	154	166	172	76
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1949.4	1949.4	1949.4	1949.4	1949.4
2.5°	1952.5	1952.5	1943.2	1949.4	1949.4
5°	1949.4	1946.3	1937.1	1946.3	1946.3
7.5°	1940.1	1937.1	1930.9	1940.1	1937.1
10°	1921.7	1921.7	1915.5	1924.8	1924.8
12.5°	1906.3	1903.2	1900.2	1912.5	1909.4
15°	1881.7	1881.7	1878.6	1894.0	1890.9
17.5°	1850.9	1854.0	1857.1	1869.4	1872.5
20°	1817.1	1823.3	1826.3	1844.8	1844.8
22.5°	1786.3	1789.4	1795.6	1814.0	1814.0
25°	1746.3	1752.5	1764.8	1780.2	1783.3
27.5°	1706.4	1709.4	1724.8	1746.3	1749.4
30°	1654.1	1663.3	1681.7	1706.4	1709.4
32.5°	1607.9	1617.1	1638.7	1663.3	1669.4
35°	1549.5	1561.8	1586.4	1617.1	1623.3
37.5°	1497.2	1506.4	1537.2	1571.0	1580.2
40°	1432.9	1451.0	1481.8	1521.8	1537.2
42.5°	1368.3	1386.7	1423.7	1475.6	1494.1
45°	1300.6	1322.1	1368.3	1426.7	1451.0
47.5°	1232.9	1257.5	1309.8	1377.5	1405.2
50°	1156.0	1186.8	1251.4	1328.3	1359.1
52.5°	1082.2	1119.1	1189.9	1276.0	1316.0
55°	1005.3	1042.2	1134.5	1223.7	1266.8
57.5°	919.2	968.4	1069.9	1171.4	1217.6
60°	839.5	885.3	1008.4	1119.1	1165.3
62.5°	753.4	814.9	946.8	1063.7	1109.9
65°	664.1	731.8	882.2	999.1	1045.3
67.5°	584.2	658.0	818.0	934.5	980.7
70°	488.8	581.1	747.2	863.8	909.9
72.5°	399.6	501.1	673.4	787.2	830.3
75°	313.5	427.3	596.5	698.0	719.5
77.5°	233.8	353.5	516.5	559.6	544.2
80°	166.1	283.0	402.7	381.1	390.4
82.5°	107.7	215.3	249.2	283.0	291.9
85°	61.5	126.1	153.8	166.1	172.3
87.5°	27.7	46.1	61.5	61.5	58.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)