

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: P272115

Luminaire Tested: **24CZ2-65-UNV-L940-CD1-U**

Issue Date: 3/3/2020

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: P272115  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-65-UNV-L940-CD1-U  
Description: 2'x4' TROFFER LED MODULE,RIBBED LENS, 90CRI  
Light Source: (112) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

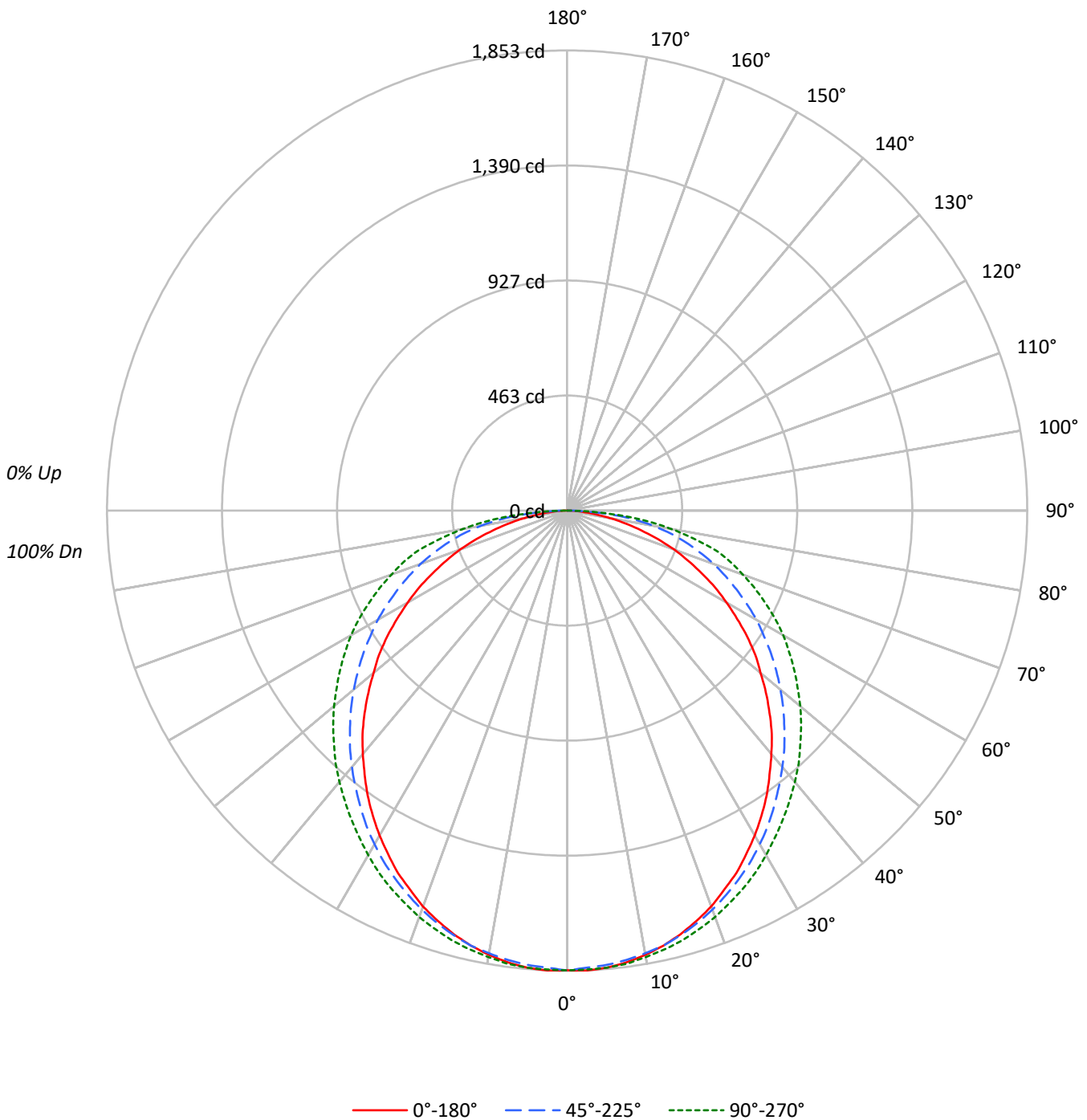
Lumens per Lamp: N/A  
Luminaire Lumens: 5614.0 lumens  
Efficiency: N/A  
Efficacy: 89.4 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 62.8  
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	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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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°	2491	2491	2491
5°	2496	2480	2496
10°	2481	2474	2494
15°	2460	2465	2496
20°	2430	2448	2494
25°	2392	2431	2491
30°	2347	2411	2489
35°	2301	2386	2490
40°	2248	2369	2506
45°	2194	2353	2527
50°	2129	2347	2565
55°	2075	2351	2617
60°	1995	2371	2707
65°	1904	2396	2805
70°	1803	2469	2960
75°	1607	2576	3234
80°	1371	2727	3305
85°	977	2703	3163



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.2	3.1
10°-20°	501.0	8.9
20°-30°	756.7	13.5
30°-40°	912.0	16.2
40°-50°	957.5	17.1
50°-60°	895.8	16.0
60°-70°	739.7	13.2
70°-80°	504.1	9.0
80°-90°	171.9	3.1
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°	1433.0	25.5
0°-40°	2345.0	41.8
0°-60°	4198.3	74.8
0°-90°	5614.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5614.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1851	1851	1851	1851	1851	
5°	1848	1846	1836	1848	1848	175
15°	1766	1768	1770	1788	1792	498
25°	1611	1619	1637	1669	1678	741
35°	1401	1416	1453	1501	1516	875
45°	1153	1177	1237	1304	1328	889
55°	885	920	1002	1084	1116	790
65°	598	648	752	848	881	593
75°	309	380	496	589	622	330
85°	63	125	175	197	205	79
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1851.4	1851.4	1851.4	1851.4	1851.4
2.5°	1853.3	1851.4	1842.1	1851.4	1849.6
5°	1847.7	1845.9	1836.5	1847.7	1847.7
7.5°	1834.7	1834.7	1825.4	1838.4	1840.3
10°	1816.1	1816.1	1810.5	1825.4	1825.4
12.5°	1793.7	1793.7	1793.7	1808.6	1810.5
15°	1765.8	1767.6	1769.5	1788.1	1791.8
17.5°	1732.2	1736.0	1741.6	1763.9	1767.6
20°	1696.9	1700.6	1709.9	1736.0	1741.6
22.5°	1652.1	1661.5	1674.5	1704.3	1709.9
25°	1611.2	1618.6	1637.2	1668.9	1678.2
27.5°	1560.9	1572.1	1596.3	1629.8	1642.8
30°	1510.6	1521.8	1551.6	1590.7	1601.9
32.5°	1456.6	1473.3	1505.0	1546.0	1559.0
35°	1400.7	1415.6	1452.8	1501.3	1516.2
37.5°	1339.2	1359.7	1400.7	1452.8	1471.5
40°	1279.6	1302.0	1348.5	1404.4	1426.8
42.5°	1220.0	1242.4	1294.5	1357.9	1380.2
45°	1153.0	1177.2	1236.8	1303.8	1328.1
47.5°	1085.9	1115.7	1180.9	1251.7	1277.8
50°	1017.0	1050.5	1121.3	1195.8	1225.6
52.5°	955.5	987.2	1061.7	1141.8	1169.7
55°	884.7	920.1	1002.1	1084.0	1115.7
57.5°	812.1	851.2	938.8	1028.2	1059.8
60°	741.3	784.2	881.0	970.4	1005.8
62.5°	672.4	715.2	815.8	909.0	944.4
65°	597.9	648.2	752.5	847.5	881.0
67.5°	527.1	581.1	691.0	784.2	817.7
70°	458.2	510.4	627.7	719.0	752.5
72.5°	383.7	443.3	560.6	655.6	691.0
75°	309.2	380.0	495.5	588.6	622.1
77.5°	240.3	312.9	428.4	504.8	521.5
80°	176.9	251.5	352.0	406.1	426.5
82.5°	113.6	188.1	268.2	307.3	324.1
85°	63.3	124.8	175.1	197.4	204.9
87.5°	26.1	54.0	70.8	80.1	80.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)