

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: P272174

Luminaire Tested: **24CZ2-60HE-S-UNV-L935-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: P272174  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-60HE-S-UNV-L935-CD1-U  
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS, 90CRI  
Light Source: (392) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

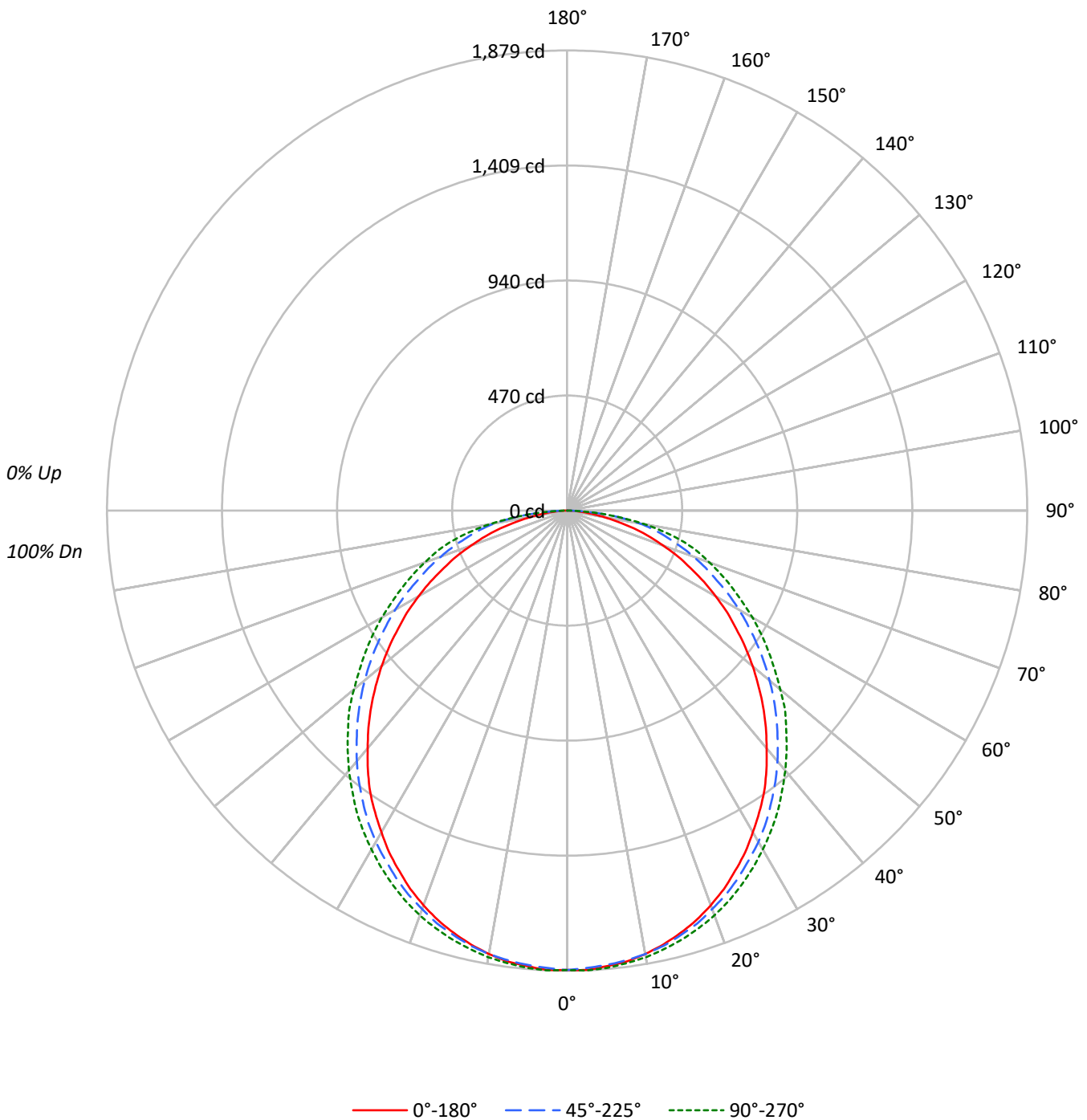
Lumens per Lamp: N/A  
Luminaire Lumens: 5340.0 lumens  
Efficiency: N/A  
Efficacy: 121.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 44.1  
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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	2524	2524	2524
5°	2522	2515	2531
10°	2512	2512	2531
15°	2488	2500	2526
20°	2455	2480	2518
25°	2410	2455	2503
30°	2356	2427	2482
35°	2304	2388	2463
40°	2225	2348	2434
45°	2153	2301	2408
50°	2070	2258	2379
55°	1978	2216	2355
60°	1885	2182	2351
65°	1766	2144	2365
70°	1635	2155	2429
75°	1464	2195	2566
80°	1183	2326	2510
85°	891	2042	1990



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	177.6	3.3
10°-20°	507.5	9.5
20°-30°	762.8	14.3
30°-40°	908.7	17.0
40°-50°	930.0	17.4
50°-60°	837.2	15.7
60°-70°	657.5	12.3
70°-80°	426.7	8.0
80°-90°	132.0	2.5
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°	1447.9	27.1
0°-40°	2356.6	44.1
0°-60°	4123.8	77.2
0°-90°	5340.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5340.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1876	1876	1876	1876	1876	
5°	1868	1871	1862	1873	1874	177
15°	1786	1791	1795	1810	1813	504
25°	1623	1637	1654	1681	1686	748
35°	1403	1420	1454	1489	1499	875
45°	1131	1158	1209	1255	1265	872
55°	843	880	945	994	1004	756
65°	555	597	673	729	743	552
75°	282	336	422	480	494	298
85°	58	107	132	129	129	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1876.0	1876.0	1876.0	1876.0	1876.0
2.5°	1877.7	1877.7	1869.2	1877.7	1879.4
5°	1867.5	1870.9	1862.4	1872.6	1874.3
7.5°	1857.3	1857.3	1852.2	1862.4	1864.1
10°	1838.7	1840.4	1838.7	1850.5	1852.2
12.5°	1814.9	1818.3	1820.0	1831.9	1833.6
15°	1786.1	1791.2	1794.6	1809.8	1813.2
17.5°	1753.9	1758.9	1767.4	1784.4	1787.8
20°	1714.8	1721.6	1731.8	1753.9	1758.9
22.5°	1672.4	1679.2	1696.2	1716.5	1725.0
25°	1623.2	1636.8	1653.8	1680.9	1686.0
27.5°	1574.1	1585.9	1608.0	1636.8	1643.6
30°	1516.4	1535.0	1562.2	1591.0	1597.8
32.5°	1460.4	1479.1	1511.3	1541.8	1550.3
35°	1402.7	1419.7	1453.6	1489.2	1499.4
37.5°	1336.6	1358.6	1396.0	1431.6	1441.8
40°	1267.0	1294.2	1336.6	1373.9	1385.8
42.5°	1200.9	1229.7	1272.1	1312.8	1326.4
45°	1131.4	1158.5	1209.4	1255.2	1265.4
47.5°	1060.1	1090.6	1144.9	1190.7	1207.7
50°	988.9	1021.1	1078.8	1126.3	1136.4
52.5°	917.6	951.6	1012.6	1063.5	1068.6
55°	843.0	880.3	944.8	994.0	1004.1
57.5°	775.2	807.4	876.9	927.8	939.7
60°	700.5	736.1	810.8	858.3	873.5
62.5°	629.3	666.6	744.6	792.1	805.7
65°	554.7	597.1	673.4	729.4	742.9
67.5°	490.2	530.9	612.3	666.6	680.2
70°	415.6	461.4	547.9	603.8	617.4
72.5°	351.1	398.6	485.1	539.4	559.7
75°	281.6	335.8	422.3	480.0	493.6
77.5°	213.7	276.5	364.7	408.8	408.8
80°	152.7	218.8	300.2	320.6	324.0
82.5°	100.1	164.5	222.2	220.5	220.5
85°	57.7	106.9	132.3	128.9	128.9
87.5°	22.1	44.1	47.5	47.5	45.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)