

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: P272176

Luminaire Tested: **24CZ2-60HE-S-UNV-L950-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: P272176  
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-L950-CD1-U  
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS, 90CRI  
Light Source: (392) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

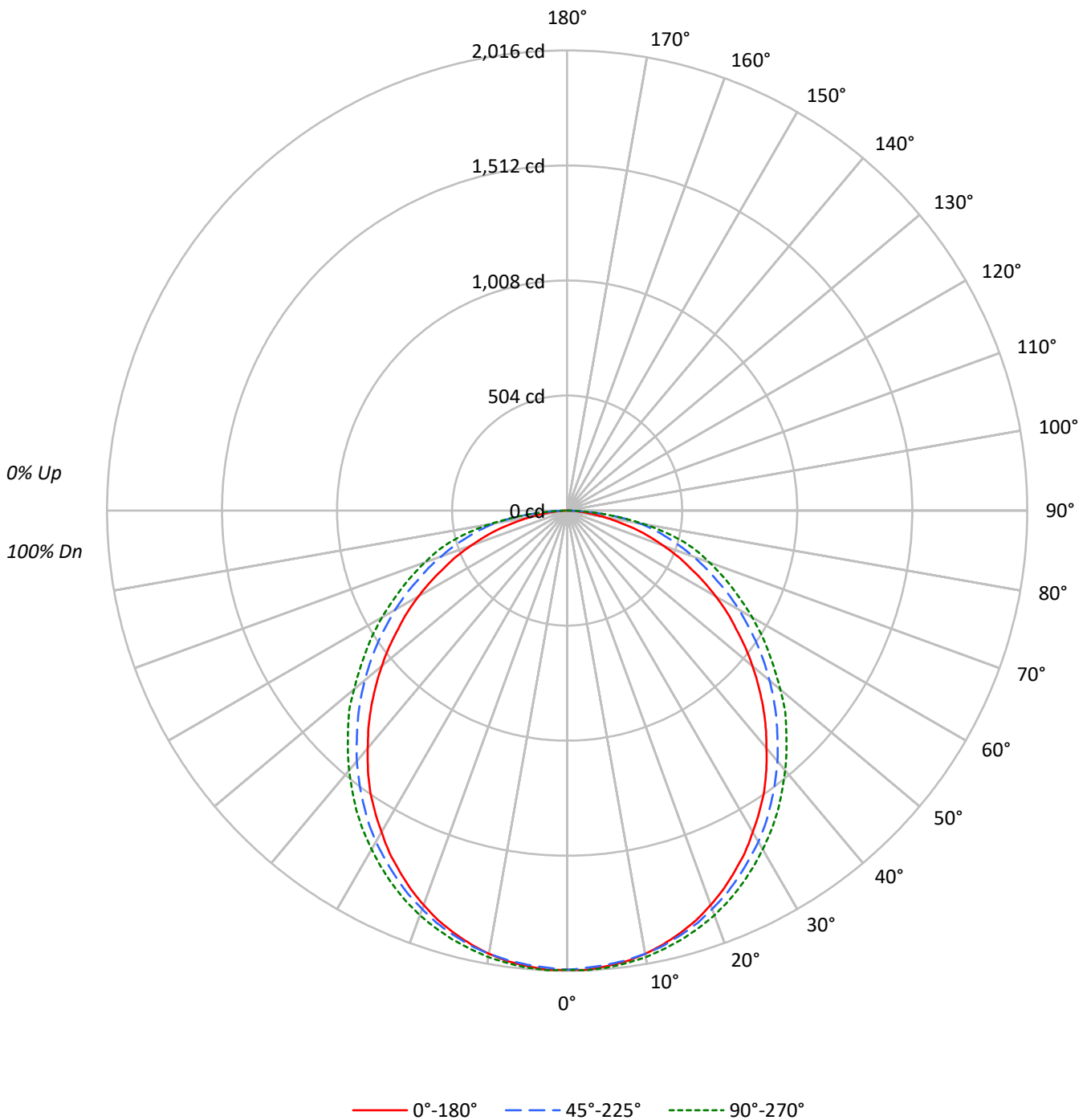
Lumens per Lamp: N/A  
Luminaire Lumens: 5727.0 lumens  
Efficiency: N/A  
Efficacy: 129.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	2707	2707	2707
5°	2705	2698	2715
10°	2694	2694	2714
15°	2668	2681	2709
20°	2633	2659	2701
25°	2585	2633	2684
30°	2527	2603	2662
35°	2471	2561	2641
40°	2387	2518	2610
45°	2309	2468	2582
50°	2220	2422	2551
55°	2121	2377	2526
60°	2022	2340	2521
65°	1894	2299	2537
70°	1753	2312	2605
75°	1570	2355	2752
80°	1268	2495	2692
85°	954	2191	2135



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	190.5	3.3
10°-20°	544.2	9.5
20°-30°	818.1	14.3
30°-40°	974.5	17.0
40°-50°	997.4	17.4
50°-60°	897.9	15.7
60°-70°	705.2	12.3
70°-80°	457.7	8.0
80°-90°	141.5	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°	1552.8	27.1
0°-40°	2527.3	44.1
0°-60°	4422.6	77.2
0°-90°	5727.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5727.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2012	2012	2012	2012	2012	
5°	2003	2006	1997	2008	2010	190
15°	1916	1921	1925	1941	1945	540
25°	1741	1755	1774	1803	1808	802
35°	1504	1523	1559	1597	1608	939
45°	1213	1242	1297	1346	1357	935
55°	904	944	1013	1066	1077	811
65°	595	640	722	782	797	592
75°	302	360	453	515	529	320
85°	62	115	142	138	138	75
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2011.9	2011.9	2011.9	2011.9	2011.9
2.5°	2013.8	2013.8	2004.7	2013.8	2015.6
5°	2002.8	2006.5	1997.4	2008.3	2010.1
7.5°	1991.9	1991.9	1986.5	1997.4	1999.2
10°	1971.9	1973.7	1971.9	1984.6	1986.5
12.5°	1946.4	1950.1	1951.9	1964.6	1966.5
15°	1915.5	1921.0	1924.6	1941.0	1944.6
17.5°	1881.0	1886.4	1895.5	1913.7	1917.3
20°	1839.1	1846.4	1857.3	1881.0	1886.4
22.5°	1793.6	1800.9	1819.1	1840.9	1850.0
25°	1740.9	1755.4	1773.6	1802.7	1808.2
27.5°	1688.1	1700.9	1724.5	1755.4	1762.7
30°	1626.3	1646.3	1675.4	1706.3	1713.6
32.5°	1566.3	1586.3	1620.8	1653.6	1662.7
35°	1504.4	1522.6	1559.0	1597.2	1608.1
37.5°	1433.5	1457.1	1497.1	1535.3	1546.2
40°	1358.9	1388.0	1433.5	1473.5	1486.2
42.5°	1287.9	1318.9	1364.3	1408.0	1422.5
45°	1213.3	1242.5	1297.0	1346.1	1357.1
47.5°	1136.9	1169.7	1227.9	1277.0	1295.2
50°	1060.5	1095.1	1157.0	1207.9	1218.8
52.5°	984.1	1020.5	1086.0	1140.6	1146.0
55°	904.1	944.1	1013.2	1066.0	1076.9
57.5°	831.3	865.9	940.5	995.1	1007.8
60°	751.3	789.5	869.5	920.5	936.8
62.5°	674.9	714.9	798.6	849.5	864.1
65°	594.8	640.3	722.2	782.2	796.8
67.5°	525.7	569.4	656.7	714.9	729.5
70°	445.7	494.8	587.6	647.6	662.2
72.5°	376.6	427.5	520.3	578.5	600.3
75°	302.0	360.2	453.0	514.8	529.4
77.5°	229.2	296.5	391.1	438.4	438.4
80°	163.7	234.7	322.0	343.8	347.4
82.5°	107.3	176.5	238.3	236.5	236.5
85°	61.8	114.6	141.9	138.3	138.3
87.5°	23.6	47.3	50.9	50.9	49.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)