

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: P272175

Luminaire Tested: **24CZ2-60HE-S-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: P272175
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-L940-CD1-U
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS, 90CRI
Light Source: (392) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

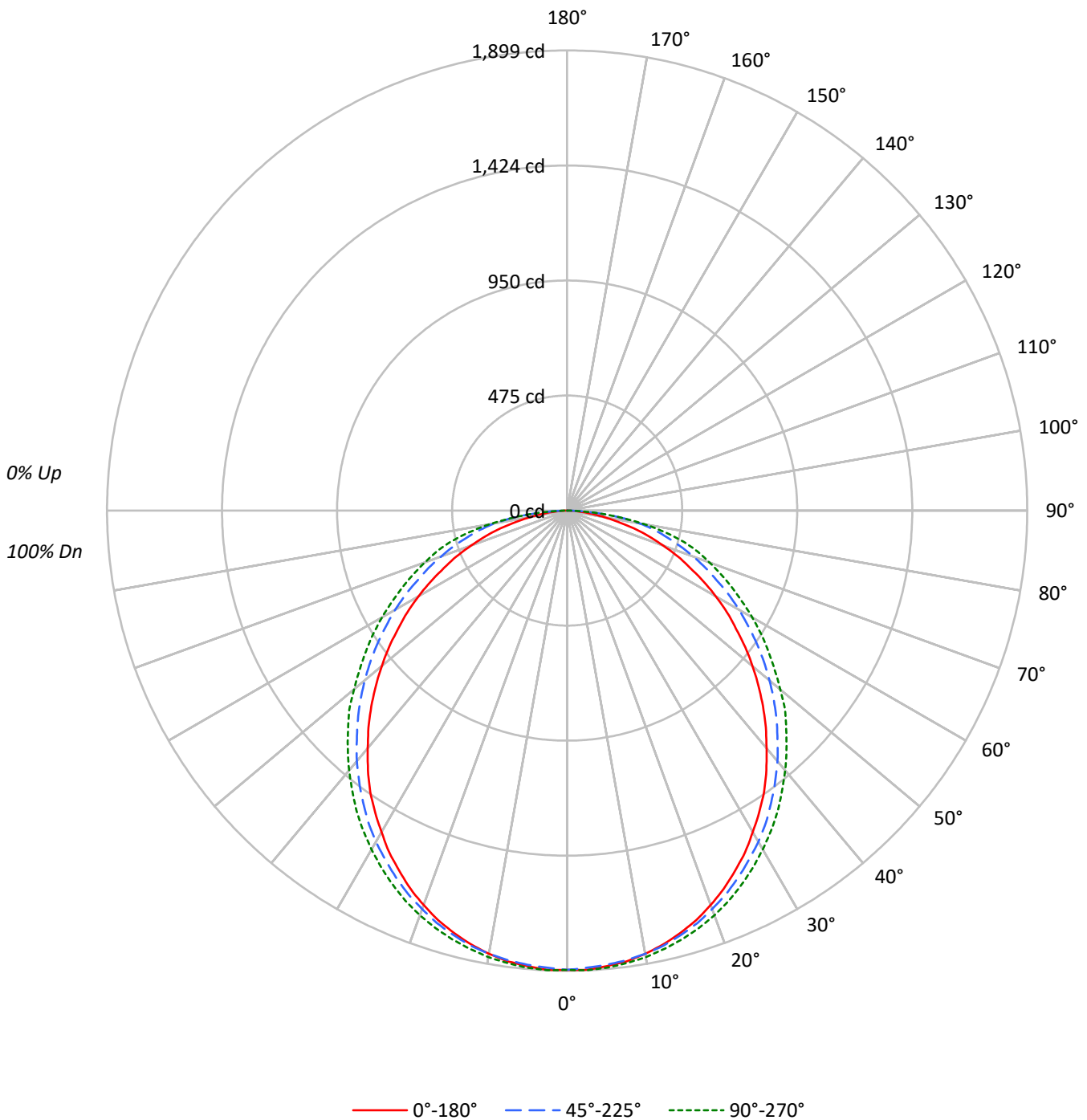
Lumens per Lamp: N/A
Luminaire Lumens: 5395.0 lumens
Efficiency: N/A
Efficacy: 122.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	2550	2550	2550
5°	2548	2541	2558
10°	2538	2538	2557
15°	2514	2525	2552
20°	2481	2505	2545
25°	2435	2480	2529
30°	2380	2452	2508
35°	2328	2412	2488
40°	2248	2372	2459
45°	2175	2325	2433
50°	2091	2281	2403
55°	1998	2239	2380
60°	1904	2204	2375
65°	1784	2166	2390
70°	1651	2177	2454
75°	1479	2218	2593
80°	1195	2350	2536
85°	900	2064	2010



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.4	3.3
10°-20°	512.7	9.5
20°-30°	770.7	14.3
30°-40°	918.0	17.0
40°-50°	939.6	17.4
50°-60°	845.9	15.7
60°-70°	664.3	12.3
70°-80°	431.1	8.0
80°-90°	133.4	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°	1462.8	27.1
0°-40°	2380.8	44.1
0°-60°	4166.3	77.2
0°-90°	5395.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5395.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1895	1895	1895	1895	1895	
5°	1887	1890	1882	1892	1894	179
15°	1804	1810	1813	1828	1832	509
25°	1640	1654	1671	1698	1703	755
35°	1417	1434	1469	1505	1515	884
45°	1143	1170	1222	1268	1278	881
55°	852	889	954	1004	1014	764
65°	560	603	680	737	751	558
75°	284	339	427	485	499	301
85°	58	108	134	130	130	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1895.3	1895.3	1895.3	1895.3	1895.3
2.5°	1897.0	1897.0	1888.4	1897.0	1898.7
5°	1886.7	1890.2	1881.6	1891.9	1893.6
7.5°	1876.4	1876.4	1871.3	1881.6	1883.3
10°	1857.6	1859.3	1857.6	1869.6	1871.3
12.5°	1833.6	1837.0	1838.7	1850.7	1852.5
15°	1804.5	1809.6	1813.0	1828.5	1831.9
17.5°	1771.9	1777.1	1785.6	1802.8	1806.2
20°	1732.5	1739.4	1749.6	1771.9	1777.1
22.5°	1689.7	1696.5	1713.7	1734.2	1742.8
25°	1640.0	1653.7	1670.8	1698.2	1703.4
27.5°	1590.3	1602.3	1624.5	1653.7	1660.5
30°	1532.0	1550.9	1578.3	1607.4	1614.3
32.5°	1475.5	1494.3	1526.9	1557.7	1566.3
35°	1417.2	1434.3	1468.6	1504.6	1514.9
37.5°	1350.4	1372.6	1410.3	1446.3	1456.6
40°	1280.1	1307.5	1350.4	1388.1	1400.1
42.5°	1213.3	1242.4	1285.2	1326.4	1340.1
45°	1143.0	1170.4	1221.8	1268.1	1278.4
47.5°	1071.0	1101.9	1156.7	1203.0	1220.1
50°	999.1	1031.6	1089.9	1137.9	1148.1
52.5°	927.1	961.4	1023.1	1074.5	1079.6
55°	851.7	889.4	954.5	1004.2	1014.5
57.5°	783.1	815.7	886.0	937.4	949.4
60°	707.7	743.7	819.1	867.1	882.5
62.5°	635.8	673.5	752.3	800.3	814.0
65°	560.4	603.2	680.3	736.9	750.6
67.5°	495.2	536.4	618.6	673.5	687.2
70°	419.8	466.1	553.5	610.1	623.8
72.5°	354.7	402.7	490.1	544.9	565.5
75°	284.5	339.3	426.7	485.0	498.7
77.5°	215.9	279.3	368.4	413.0	413.0
80°	154.2	221.1	303.3	323.9	327.3
82.5°	101.1	166.2	224.5	222.8	222.8
85°	58.3	108.0	133.7	130.2	130.2
87.5°	22.3	44.6	48.0	48.0	46.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)