

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: P272159

Luminaire Tested: **24CZ2-50HE-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: P272159
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: 24CZ2-50HE-S-UNV-L940-CD1-U
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS, 90CRI
Light Source: (224) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

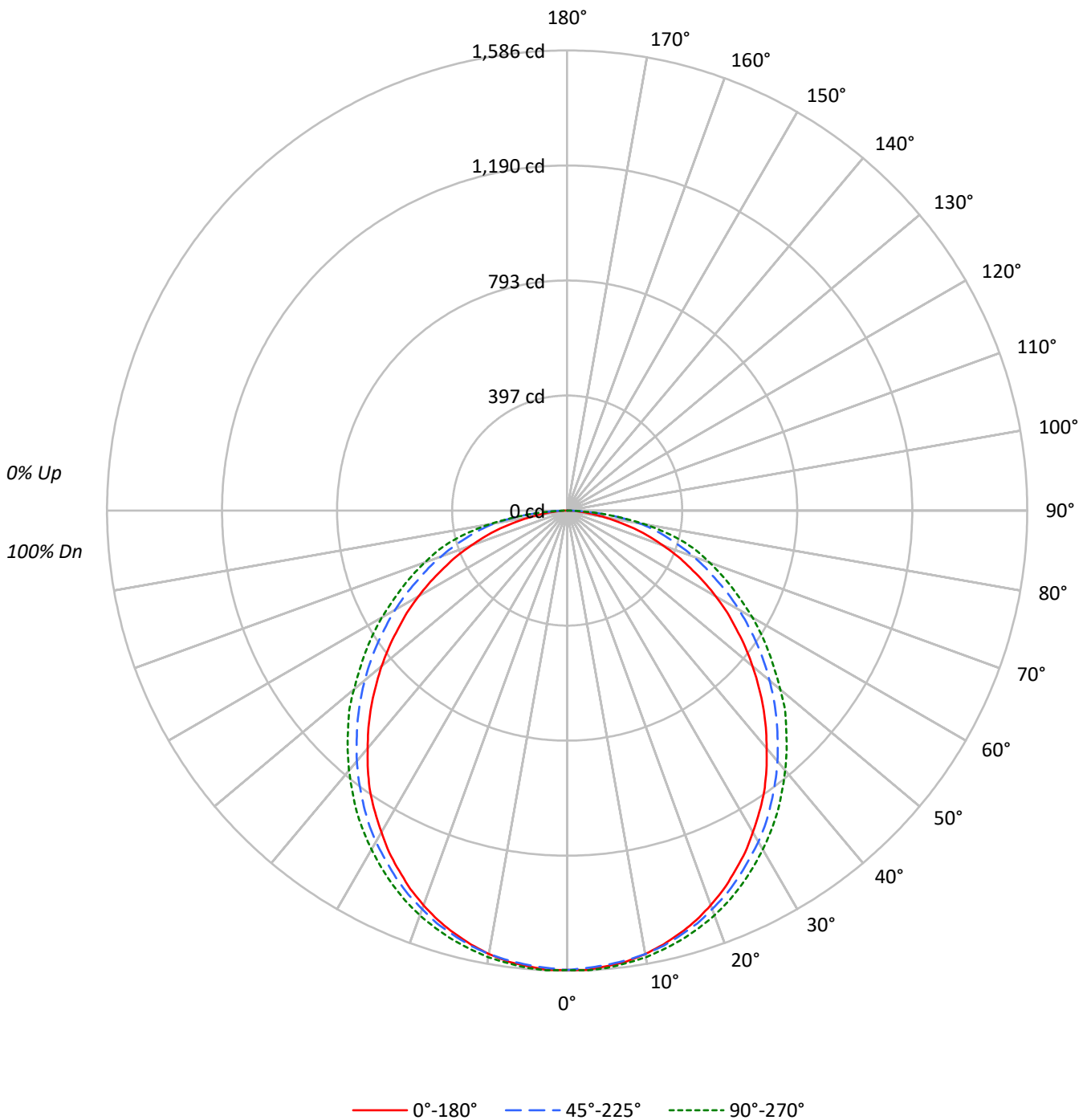
Lumens per Lamp: N/A
Luminaire Lumens: 4507.0 lumens
Efficiency: N/A
Efficacy: 116.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 38.6
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



TEST NUMBER: P272159
CATALOG NUMBER: 24CZ2-50HE-S-UNV-L940-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P272159

CATALOG NUMBER: 24CZ2-50HE-S-UNV-L940-CD1-U

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°	2130	2130	2130
5°	2129	2123	2137
10°	2120	2120	2136
15°	2100	2110	2132
20°	2072	2093	2126
25°	2034	2072	2113
30°	1988	2048	2095
35°	1945	2015	2079
40°	1878	1981	2054
45°	1817	1942	2032
50°	1747	1906	2008
55°	1669	1871	1988
60°	1591	1841	1984
65°	1490	1809	1996
70°	1380	1819	2050
75°	1235	1853	2166
80°	998	1963	2118
85°	752	1724	1680



TEST NUMBER: P272159

CATALOG NUMBER: 24CZ2-50HE-S-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.9	3.3
10°-20°	428.3	9.5
20°-30°	643.8	14.3
30°-40°	766.9	17.0
40°-50°	784.9	17.4
50°-60°	706.6	15.7
60°-70°	554.9	12.3
70°-80°	360.2	8.0
80°-90°	111.4	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°	1222.0	27.1
0°-40°	1989.0	44.1
0°-60°	3480.5	77.2
0°-90°	4507.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4507.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1583	1583	1583	1583	1583	
5°	1576	1579	1572	1580	1582	150
15°	1508	1512	1515	1528	1530	425
25°	1370	1382	1396	1419	1423	631
35°	1184	1198	1227	1257	1266	739
45°	955	978	1021	1059	1068	736
55°	712	743	797	839	848	638
65°	468	504	568	616	627	466
75°	238	284	356	405	417	251
85°	49	90	112	109	109	59
90°	0	0	0	0	0	



TEST NUMBER: P272159

CATALOG NUMBER: 24CZ2-50HE-S-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1583.3	1583.3	1583.3	1583.3	1583.3
2.5°	1584.8	1584.8	1577.6	1584.8	1586.2
5°	1576.2	1579.0	1571.9	1580.5	1581.9
7.5°	1567.6	1567.6	1563.3	1571.9	1573.3
10°	1551.8	1553.3	1551.8	1561.9	1563.3
12.5°	1531.8	1534.7	1536.1	1546.1	1547.5
15°	1507.5	1511.8	1514.6	1527.5	1530.4
17.5°	1480.3	1484.6	1491.7	1506.0	1508.9
20°	1447.3	1453.1	1461.7	1480.3	1484.6
22.5°	1411.5	1417.3	1431.6	1448.8	1455.9
25°	1370.0	1381.5	1395.8	1418.7	1423.0
27.5°	1328.5	1338.5	1357.1	1381.5	1387.2
30°	1279.8	1295.6	1318.5	1342.8	1348.6
32.5°	1232.6	1248.3	1275.5	1301.3	1308.5
35°	1183.9	1198.2	1226.9	1256.9	1265.5
37.5°	1128.1	1146.7	1178.2	1208.3	1216.9
40°	1069.4	1092.3	1128.1	1159.6	1169.6
42.5°	1013.6	1037.9	1073.7	1108.1	1119.5
45°	954.9	977.8	1020.7	1059.4	1068.0
47.5°	894.7	920.5	966.3	1005.0	1019.3
50°	834.6	861.8	910.5	950.6	959.2
52.5°	774.5	803.1	854.7	897.6	901.9
55°	711.5	743.0	797.4	838.9	847.5
57.5°	654.2	681.4	740.1	783.1	793.1
60°	591.2	621.3	684.3	724.4	737.3
62.5°	531.1	562.6	628.5	668.6	680.0
65°	468.1	503.9	568.3	615.6	627.0
67.5°	413.7	448.1	516.8	562.6	574.1
70°	350.7	389.4	462.4	509.6	521.1
72.5°	296.3	336.4	409.4	455.2	472.4
75°	237.6	283.5	356.5	405.1	416.6
77.5°	180.4	233.3	307.8	345.0	345.0
80°	128.8	184.7	253.4	270.6	273.4
82.5°	84.5	138.9	187.5	186.1	186.1
85°	48.7	90.2	111.7	108.8	108.8
87.5°	18.6	37.2	40.1	40.1	38.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)