

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: FAIL-SAFE

Report Number: P311537

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CA125-W2A-U-4000K**

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: P311537
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: FAIL-SAFE
Catalog Number: 24FCZ2-50HE-UNV-L82765-S-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

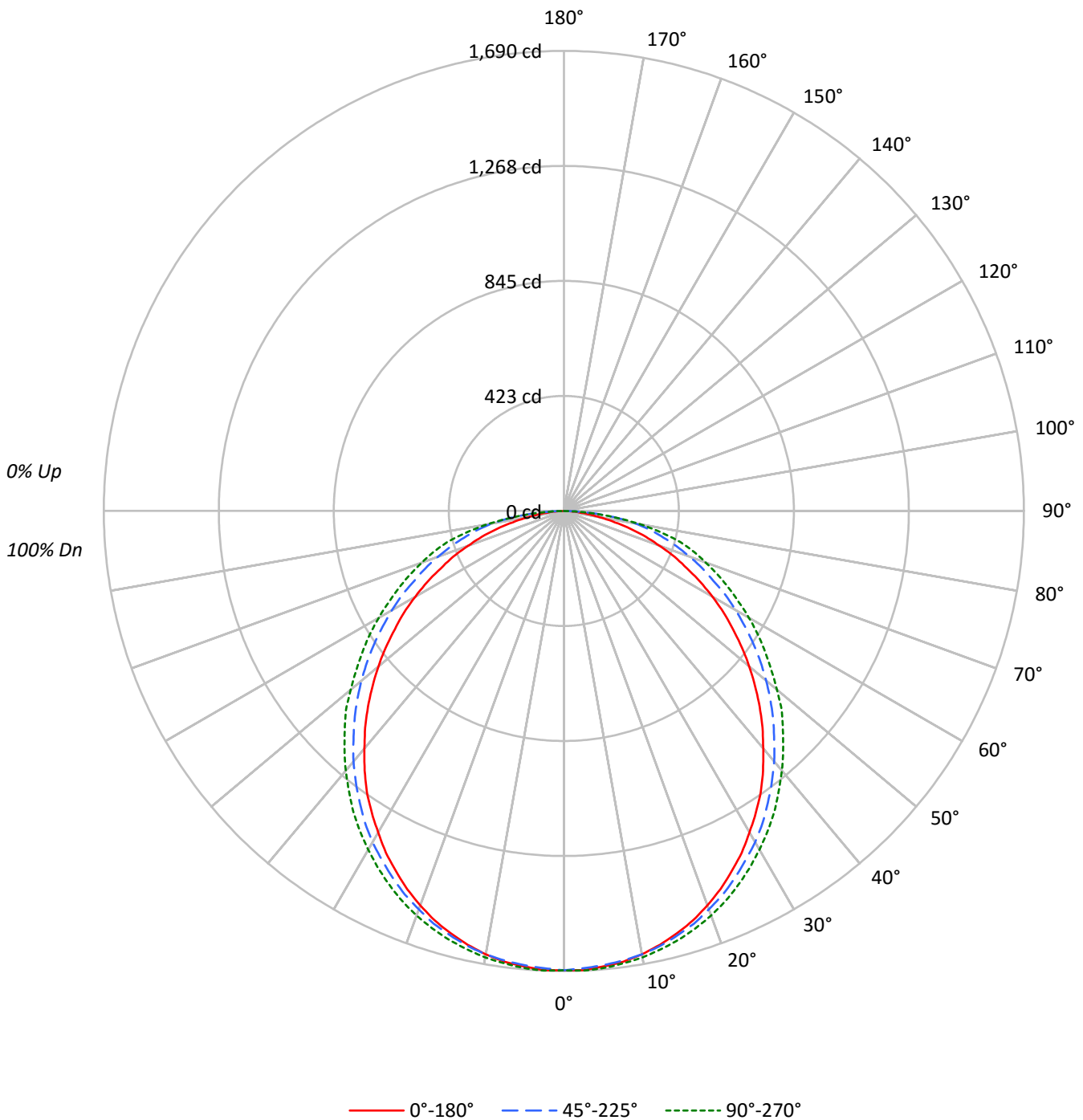
Lumens per Lamp: N/A
Luminaire Lumens: 4802.0 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 38.8
Input Voltage (V): NR
Input Current (A_{in}): 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: P311537
CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-S-CA125-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P311537

CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-S-CA125-W2A-U-4000K

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°	2270	2270	2270
5°	2268	2262	2276
10°	2259	2259	2276
15°	2237	2248	2271
20°	2208	2230	2265
25°	2167	2208	2251
30°	2119	2183	2232
35°	2072	2147	2215
40°	2001	2111	2189
45°	1936	2069	2165
50°	1861	2031	2139
55°	1778	1993	2118
60°	1695	1962	2114
65°	1588	1928	2127
70°	1470	1938	2184
75°	1316	1974	2308
80°	1064	2092	2257
85°	801	1837	1789



TEST NUMBER: P311537

CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-S-CA125-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.7	3.3
10°-20°	456.3	9.5
20°-30°	686.0	14.3
30°-40°	817.1	17.0
40°-50°	836.3	17.4
50°-60°	752.9	15.7
60°-70°	591.3	12.3
70°-80°	383.7	8.0
80°-90°	118.7	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°	1302.0	27.1
0°-40°	2119.1	44.1
0°-60°	3708.3	77.2
0°-90°	4802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4802.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1687	1687	1687	1687	1687	
5°	1679	1682	1675	1684	1685	160
15°	1606	1611	1614	1628	1630	453
25°	1460	1472	1487	1512	1516	672
35°	1261	1277	1307	1339	1348	787
45°	1017	1042	1088	1129	1138	784
55°	758	792	850	894	903	680
65°	499	537	606	656	668	497
75°	253	302	380	432	444	268
85°	52	96	119	116	116	63
90°	0	0	0	0	0	



TEST NUMBER: P311537

CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-S-CA125-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1687.0	1687.0	1687.0	1687.0	1687.0
2.5°	1688.5	1688.5	1680.9	1688.5	1690.0
5°	1679.3	1682.4	1674.8	1683.9	1685.4
7.5°	1670.2	1670.2	1665.6	1674.8	1676.3
10°	1653.4	1654.9	1653.4	1664.1	1665.6
12.5°	1632.1	1635.1	1636.6	1647.3	1648.8
15°	1606.1	1610.7	1613.8	1627.5	1630.5
17.5°	1577.2	1581.7	1589.4	1604.6	1607.7
20°	1542.1	1548.2	1557.3	1577.2	1581.7
22.5°	1503.9	1510.0	1525.3	1543.6	1551.2
25°	1459.7	1471.9	1487.2	1511.6	1516.1
27.5°	1415.5	1426.1	1446.0	1471.9	1478.0
30°	1363.6	1380.4	1404.8	1430.7	1436.8
32.5°	1313.3	1330.1	1359.0	1386.5	1394.1
35°	1261.4	1276.7	1307.2	1339.2	1348.4
37.5°	1201.9	1221.8	1255.3	1287.3	1296.5
40°	1139.4	1163.8	1201.9	1235.5	1246.2
42.5°	1079.9	1105.8	1144.0	1180.6	1192.8
45°	1017.4	1041.8	1087.5	1128.7	1137.9
47.5°	953.3	980.8	1029.6	1070.8	1086.0
50°	889.2	918.2	970.1	1012.8	1021.9
52.5°	825.2	855.7	910.6	956.4	960.9
55°	758.1	791.6	849.6	893.8	903.0
57.5°	697.1	726.0	788.6	834.3	845.0
60°	629.9	662.0	729.1	771.8	785.5
62.5°	565.9	599.4	669.6	712.3	724.5
65°	498.8	536.9	605.5	655.9	668.1
67.5°	440.8	477.4	550.6	599.4	611.6
70°	373.7	414.9	492.7	543.0	555.2
72.5°	315.7	358.4	436.2	485.0	503.3
75°	253.2	302.0	379.8	431.7	443.9
77.5°	192.2	248.6	327.9	367.6	367.6
80°	137.3	196.8	270.0	288.3	291.3
82.5°	90.0	148.0	199.8	198.3	198.3
85°	51.9	96.1	119.0	115.9	115.9
87.5°	19.8	39.7	42.7	42.7	41.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)