

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: P311539

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CA125-W2A-U-5000K**

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: P311539
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5000K 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: 4954.0 lumens
Efficiency: N/A
Efficacy: 126.1 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

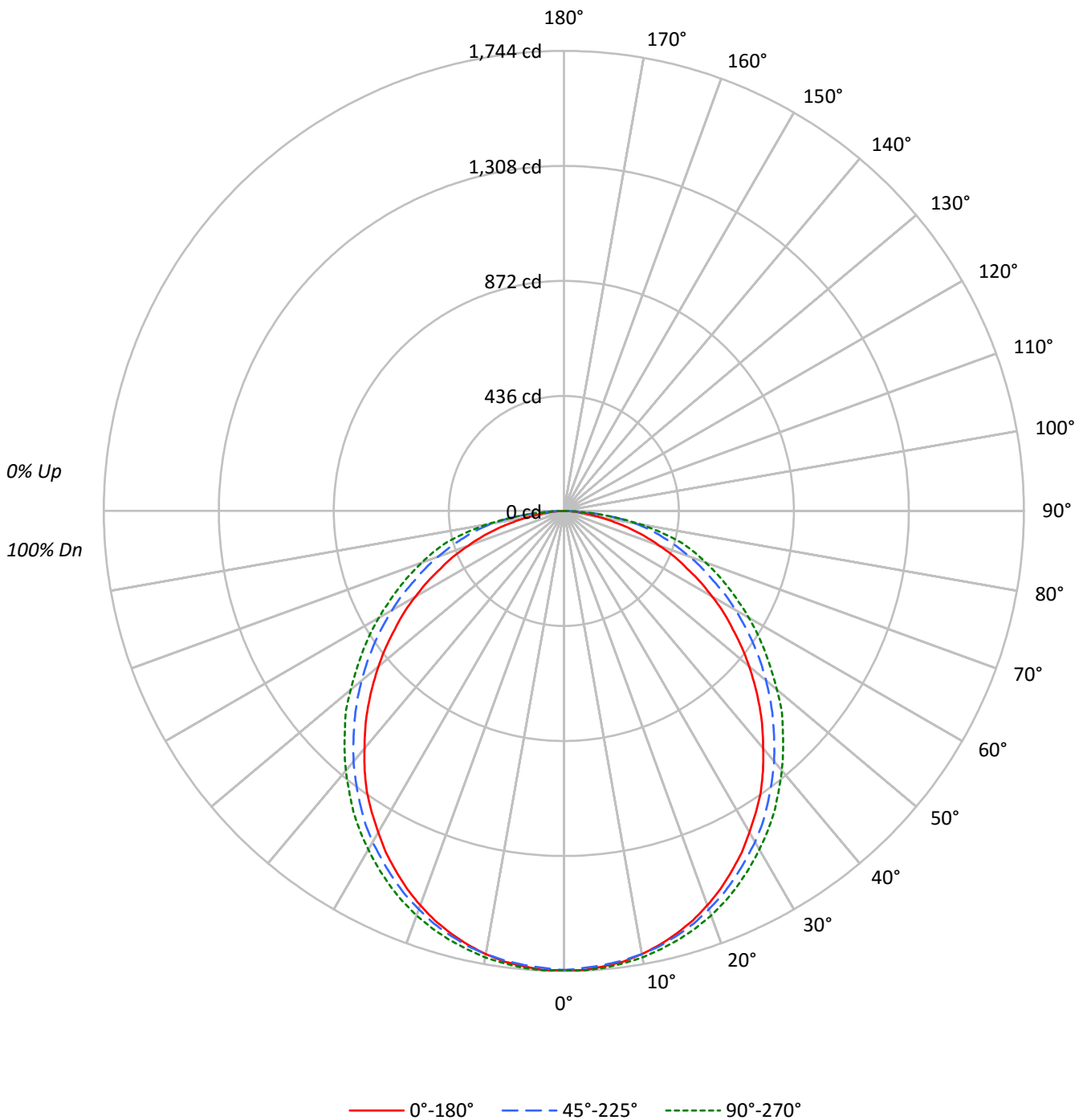
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2342	2342	2342
5°	2340	2334	2348
10°	2331	2331	2348
15°	2308	2319	2343
20°	2278	2300	2336
25°	2236	2278	2322
30°	2186	2252	2303
35°	2137	2215	2285
40°	2065	2178	2258
45°	1997	2135	2234
50°	1920	2095	2207
55°	1835	2056	2185
60°	1749	2024	2181
65°	1638	1989	2194
70°	1517	2000	2253
75°	1358	2037	2380
80°	1097	2158	2329
85°	826	1894	1846



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.8	3.3
10°-20°	470.8	9.5
20°-30°	707.7	14.3
30°-40°	843.0	17.0
40°-50°	862.8	17.4
50°-60°	776.7	15.7
60°-70°	610.0	12.3
70°-80°	395.9	8.0
80°-90°	122.4	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°	1343.2	27.1
0°-40°	2186.2	44.1
0°-60°	3825.7	77.2
0°-90°	4954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4954.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1740	1740	1740	1740	1740	
5°	1732	1736	1728	1737	1739	165
15°	1657	1662	1665	1679	1682	467
25°	1506	1518	1534	1559	1564	694
35°	1301	1317	1349	1382	1391	812
45°	1050	1075	1122	1164	1174	809
55°	782	817	876	922	932	701
65°	515	554	625	677	689	512
75°	261	312	392	445	458	276
85°	54	99	123	120	120	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1740.4	1740.4	1740.4	1740.4	1740.4
2.5°	1741.9	1741.9	1734.1	1741.9	1743.5
5°	1732.5	1735.7	1727.8	1737.2	1738.8
7.5°	1723.1	1723.1	1718.3	1727.8	1729.4
10°	1705.8	1707.3	1705.8	1716.8	1718.3
12.5°	1683.7	1686.9	1688.4	1699.5	1701.0
15°	1657.0	1661.7	1664.8	1679.0	1682.2
17.5°	1627.1	1631.8	1639.7	1655.4	1658.5
20°	1590.9	1597.2	1606.6	1627.1	1631.8
22.5°	1551.5	1557.8	1573.6	1592.5	1600.3
25°	1505.9	1518.5	1534.2	1559.4	1564.1
27.5°	1460.3	1471.3	1491.7	1518.5	1524.8
30°	1406.8	1424.1	1449.3	1476.0	1482.3
32.5°	1354.8	1372.2	1402.1	1430.4	1438.2
35°	1301.3	1317.1	1348.6	1381.6	1391.0
37.5°	1240.0	1260.4	1295.1	1328.1	1337.5
40°	1175.5	1200.6	1240.0	1274.6	1285.6
42.5°	1114.1	1140.8	1180.2	1217.9	1230.5
45°	1049.6	1074.8	1122.0	1164.4	1173.9
47.5°	983.5	1011.8	1062.2	1104.6	1120.4
50°	917.4	947.3	1000.8	1044.9	1054.3
52.5°	851.3	882.8	939.4	986.6	991.4
55°	782.1	816.7	876.5	922.1	931.6
57.5°	719.1	749.0	813.5	860.7	871.8
60°	649.9	682.9	752.2	796.2	810.4
62.5°	583.8	618.4	690.8	734.9	747.4
65°	514.6	553.9	624.7	676.6	689.2
67.5°	454.8	492.5	568.1	618.4	631.0
70°	385.5	428.0	508.3	560.2	572.8
72.5°	325.7	369.8	450.0	500.4	519.3
75°	261.2	311.6	391.8	445.3	457.9
77.5°	198.3	256.5	338.3	379.2	379.2
80°	141.6	203.0	278.5	297.4	300.6
82.5°	92.8	152.6	206.1	204.6	204.6
85°	53.5	99.1	122.7	119.6	119.6
87.5°	20.5	40.9	44.1	44.1	42.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)