

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: P311544

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CP125-W2A-U-3000K**

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: P311544  
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-CP125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 3000K 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: 4454.0 lumens  
Efficiency: N/A  
Efficacy: 116.9 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

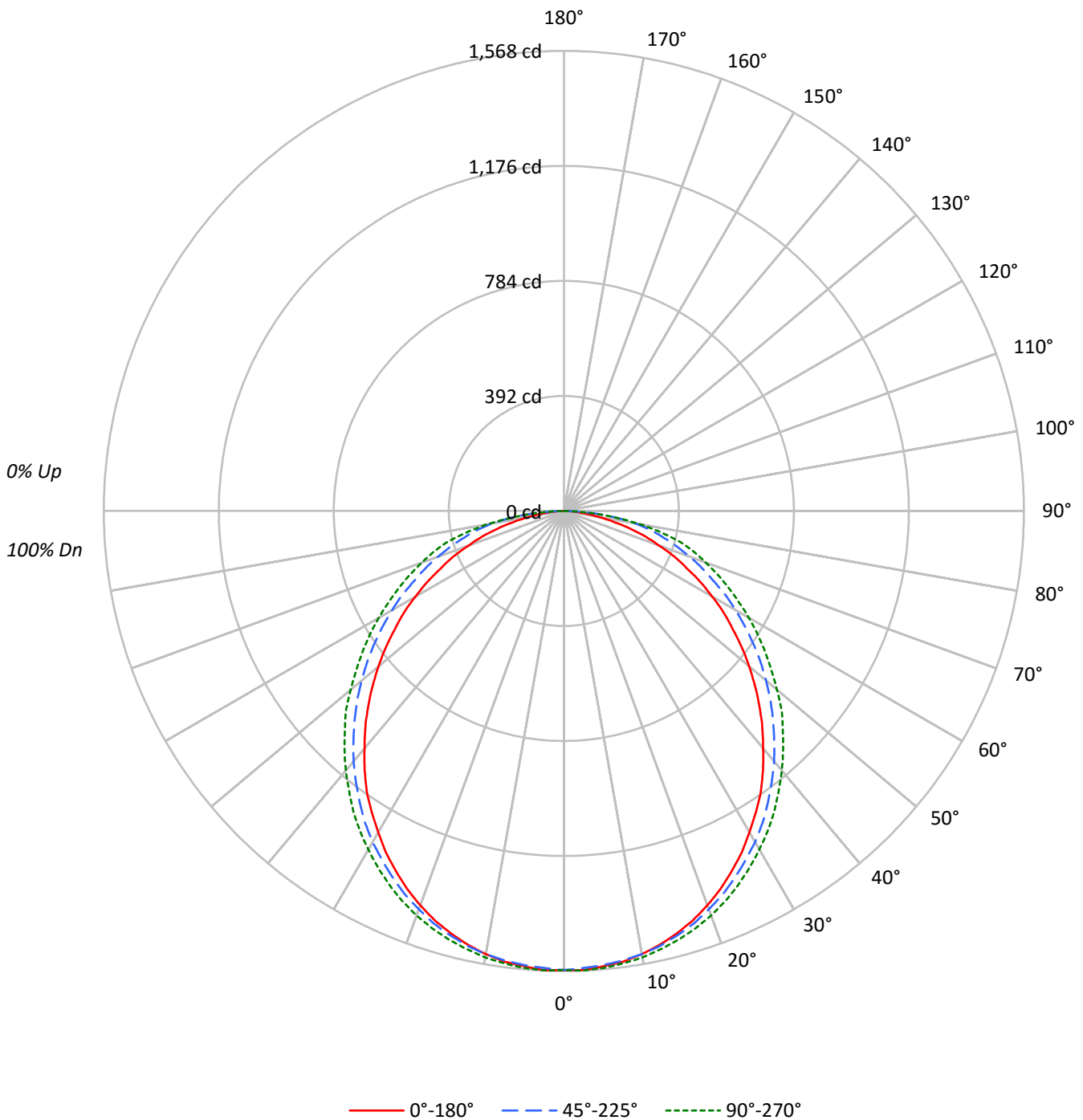
Input Watts (W): 38.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2105	2105	2105
5°	2104	2098	2111
10°	2095	2095	2111
15°	2075	2085	2107
20°	2048	2068	2101
25°	2010	2048	2088
30°	1965	2024	2071
35°	1922	1991	2054
40°	1856	1958	2030
45°	1795	1919	2008
50°	1726	1883	1984
55°	1649	1848	1965
60°	1572	1820	1961
65°	1473	1788	1973
70°	1364	1798	2026
75°	1221	1831	2140
80°	986	1940	2094
85°	743	1704	1660



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.1	3.3
10°-20°	423.3	9.5
20°-30°	636.3	14.3
30°-40°	757.9	17.0
40°-50°	775.7	17.4
50°-60°	698.3	15.7
60°-70°	548.4	12.3
70°-80°	355.9	8.0
80°-90°	110.1	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°	1207.7	27.1
0°-40°	1965.6	44.1
0°-60°	3439.6	77.2
0°-90°	4454.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4454.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1565	1565	1565	1565	1565	
5°	1558	1560	1553	1562	1563	148
15°	1490	1494	1497	1510	1512	420
25°	1354	1365	1379	1402	1406	624
35°	1170	1184	1212	1242	1251	730
45°	944	966	1009	1047	1055	727
55°	703	734	788	829	838	630
65°	463	498	562	608	620	461
75°	235	280	352	400	412	249
85°	48	89	110	108	108	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1564.7	1564.7	1564.7	1564.7	1564.7
2.5°	1566.1	1566.1	1559.1	1566.1	1567.5
5°	1557.6	1560.5	1553.4	1561.9	1563.3
7.5°	1549.2	1549.2	1544.9	1553.4	1554.8
10°	1533.6	1535.0	1533.6	1543.5	1544.9
12.5°	1513.8	1516.6	1518.0	1527.9	1529.4
15°	1489.7	1494.0	1496.8	1509.5	1512.4
17.5°	1462.9	1467.1	1474.2	1488.3	1491.2
20°	1430.3	1436.0	1444.5	1462.9	1467.1
22.5°	1394.9	1400.6	1414.8	1431.7	1438.8
25°	1353.9	1365.2	1379.4	1402.0	1406.3
27.5°	1312.9	1322.8	1341.2	1365.2	1370.9
30°	1264.8	1280.4	1303.0	1327.0	1332.7
32.5°	1218.1	1233.7	1260.5	1286.0	1293.1
35°	1170.0	1184.2	1212.4	1242.2	1250.6
37.5°	1114.8	1133.2	1164.3	1194.1	1202.5
40°	1056.8	1079.5	1114.8	1146.0	1155.9
42.5°	1001.6	1025.7	1061.1	1095.0	1106.3
45°	943.6	966.3	1008.7	1046.9	1055.4
47.5°	884.2	909.7	955.0	993.2	1007.3
50°	824.8	851.7	899.8	939.4	947.9
52.5°	765.4	793.7	844.6	887.1	891.3
55°	703.1	734.3	788.0	829.0	837.5
57.5°	646.5	673.4	731.4	773.9	783.8
60°	584.3	614.0	676.3	715.9	728.6
62.5°	524.9	556.0	621.1	660.7	672.0
65°	462.6	498.0	561.7	608.3	619.7
67.5°	408.9	442.8	510.7	556.0	567.3
70°	346.6	384.8	457.0	503.7	515.0
72.5°	292.9	332.5	404.6	449.9	466.9
75°	234.8	280.1	352.3	400.4	411.7
77.5°	178.3	230.6	304.2	341.0	341.0
80°	127.3	182.5	250.4	267.4	270.2
82.5°	83.5	137.2	185.3	183.9	183.9
85°	48.1	89.1	110.4	107.5	107.5
87.5°	18.4	36.8	39.6	39.6	38.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)