

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: P311589

Luminaire Tested: **24FCZ2-50-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: P311589  
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: 24FCZ2-50-UNV-L82765-S-CP125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (168) 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**

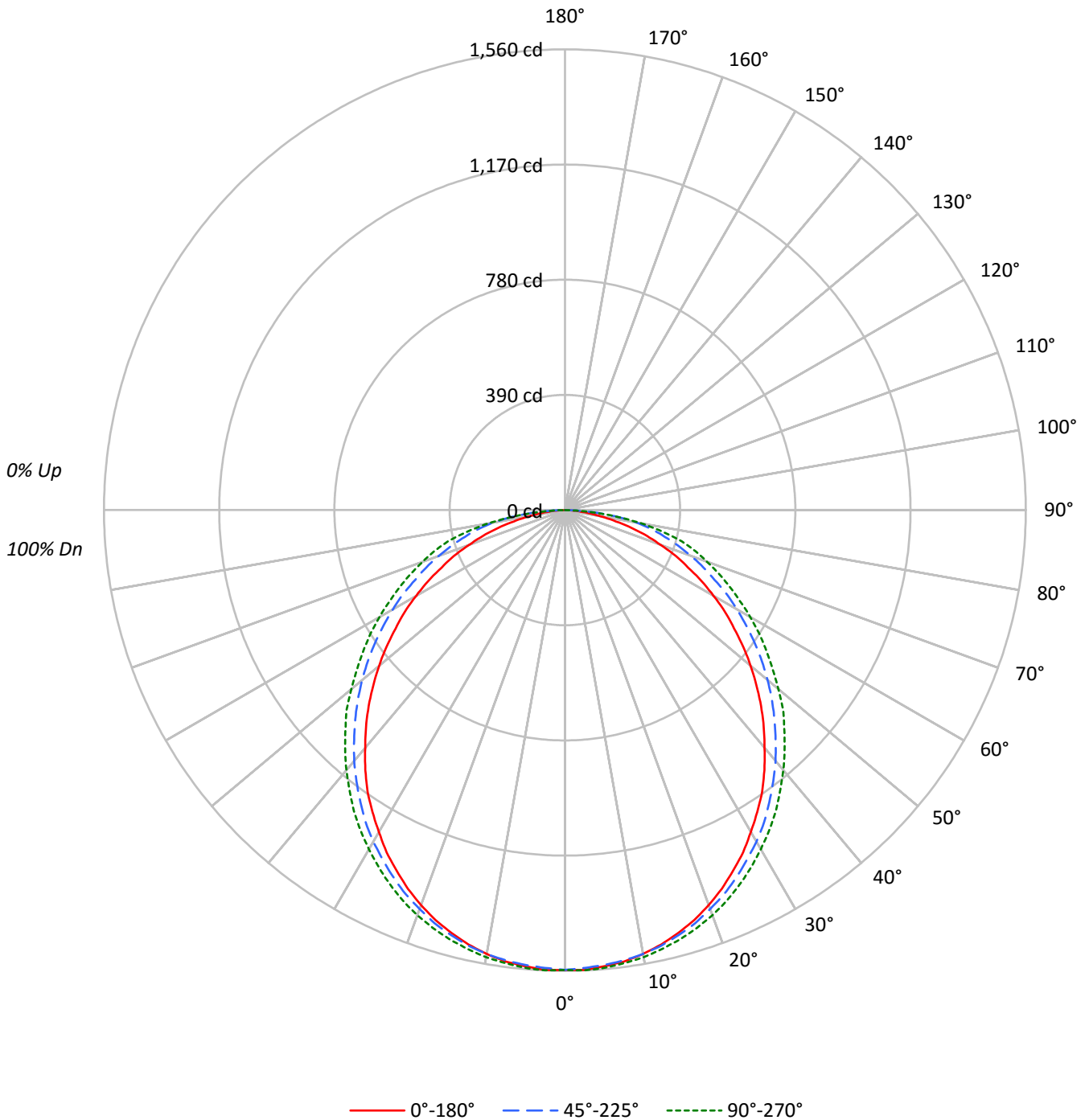
Lumens per Lamp: N/A  
Luminaire Lumens: 4432.0 lumens  
Efficiency: N/A  
Efficacy: 104.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 42.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2095	2095	2095
5°	2093	2088	2101
10°	2085	2085	2100
15°	2065	2075	2096
20°	2038	2058	2090
25°	2000	2038	2077
30°	1955	2014	2060
35°	1912	1982	2044
40°	1847	1948	2020
45°	1787	1910	1998
50°	1718	1874	1974
55°	1641	1839	1955
60°	1565	1811	1951
65°	1465	1779	1963
70°	1357	1789	2016
75°	1215	1822	2130
80°	982	1931	2084
85°	739	1695	1652



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.4	3.3
10°-20°	421.2	9.5
20°-30°	633.1	14.3
30°-40°	754.2	17.0
40°-50°	771.8	17.4
50°-60°	694.9	15.7
60°-70°	545.7	12.3
70°-80°	354.2	8.0
80°-90°	109.5	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°	1201.7	27.1
0°-40°	1955.9	44.1
0°-60°	3422.6	77.2
0°-90°	4432.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4432.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1557	1557	1557	1557	1557	
5°	1550	1553	1546	1554	1556	147
15°	1482	1487	1489	1502	1505	418
25°	1347	1358	1373	1395	1399	621
35°	1164	1178	1206	1236	1244	726
45°	939	962	1004	1042	1050	724
55°	700	731	784	825	833	627
65°	460	496	559	605	617	458
75°	234	279	350	398	410	247
85°	48	89	110	107	107	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1557.0	1557.0	1557.0	1557.0	1557.0
2.5°	1558.4	1558.4	1551.4	1558.4	1559.8
5°	1550.0	1552.8	1545.7	1554.2	1555.6
7.5°	1541.5	1541.5	1537.3	1545.7	1547.1
10°	1526.0	1527.4	1526.0	1535.9	1537.3
12.5°	1506.3	1509.1	1510.5	1520.4	1521.8
15°	1482.4	1486.6	1489.4	1502.1	1504.9
17.5°	1455.6	1459.9	1466.9	1481.0	1483.8
20°	1423.3	1428.9	1437.3	1455.6	1459.9
22.5°	1388.1	1393.7	1407.8	1424.7	1431.7
25°	1347.2	1358.5	1372.6	1395.1	1399.3
27.5°	1306.4	1316.3	1334.6	1358.5	1364.1
30°	1258.5	1274.0	1296.6	1320.5	1326.1
32.5°	1212.1	1227.6	1254.3	1279.7	1286.7
35°	1164.2	1178.3	1206.5	1236.0	1244.5
37.5°	1109.3	1127.6	1158.6	1188.2	1196.6
40°	1051.6	1074.1	1109.3	1140.3	1150.1
42.5°	996.7	1020.6	1055.8	1089.6	1100.9
45°	939.0	961.5	1003.7	1041.7	1050.2
47.5°	879.9	905.2	950.2	988.3	1002.3
50°	820.7	847.5	895.3	934.8	943.2
52.5°	761.6	789.8	840.4	882.7	886.9
55°	699.7	730.6	784.1	825.0	833.4
57.5°	643.3	670.1	727.8	770.0	779.9
60°	581.4	611.0	672.9	712.3	725.0
62.5°	522.3	553.3	618.0	657.4	668.7
65°	460.3	495.5	558.9	605.3	616.6
67.5°	406.8	440.6	508.2	553.3	564.5
70°	344.9	382.9	454.7	501.2	512.4
72.5°	291.4	330.8	402.6	447.7	464.6
75°	233.7	278.7	350.5	398.4	409.7
77.5°	177.4	229.5	302.7	339.3	339.3
80°	126.7	181.6	249.2	266.1	268.9
82.5°	83.1	136.6	184.4	183.0	183.0
85°	47.9	88.7	109.8	107.0	107.0
87.5°	18.3	36.6	39.4	39.4	38.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)