

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: P311543

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CP125-W2A-U-2700K**

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: P311543  
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-2700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 2700K 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: 4329.0 lumens  
Efficiency: N/A  
Efficacy: 112.7 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

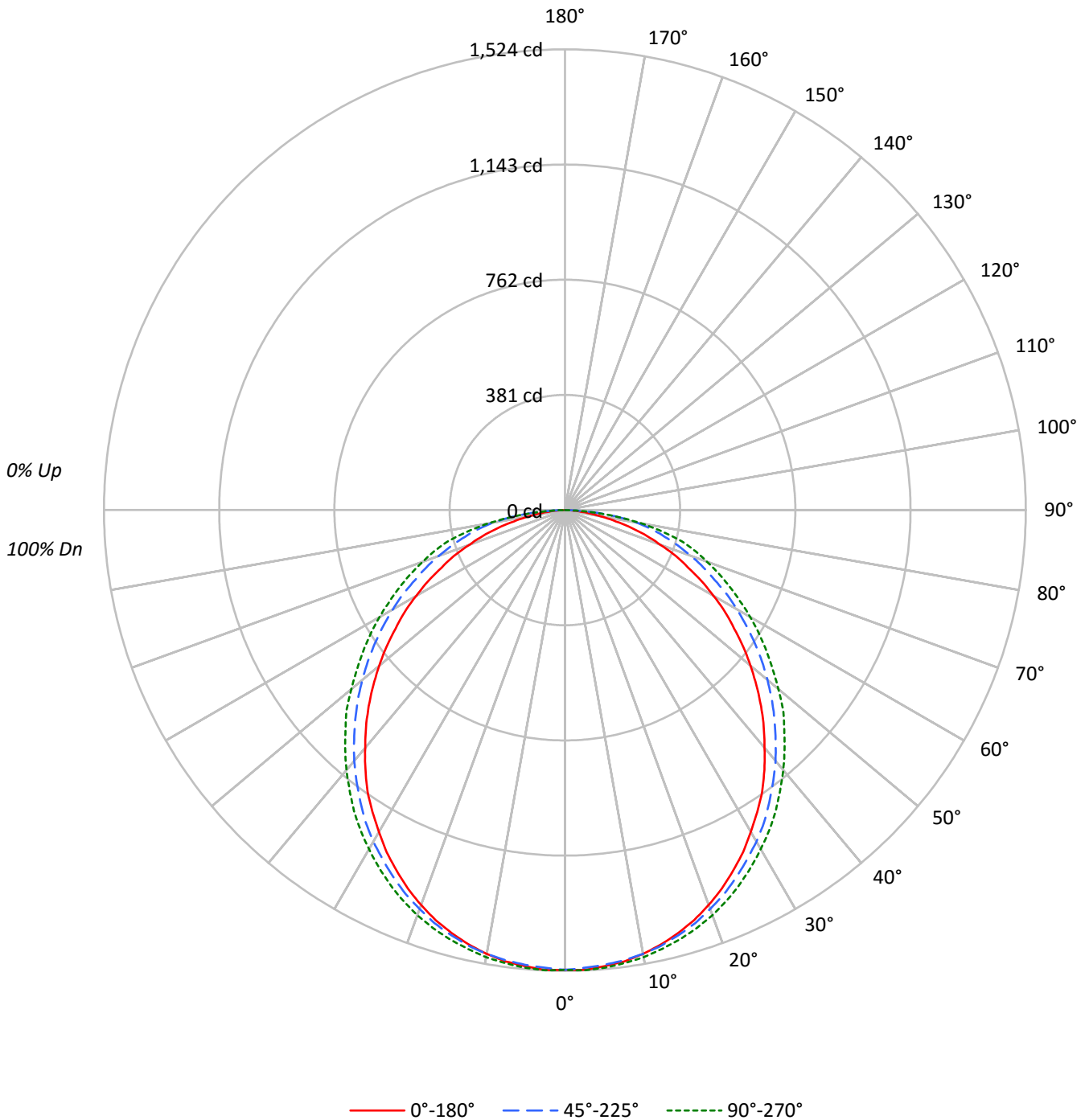
Input Watts (W): 38.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2046	2046	2046
5°	2045	2039	2052
10°	2037	2037	2052
15°	2017	2026	2048
20°	1991	2010	2042
25°	1954	1990	2029
30°	1910	1968	2012
35°	1868	1936	1997
40°	1804	1903	1973
45°	1745	1866	1952
50°	1678	1831	1928
55°	1603	1797	1909
60°	1528	1769	1906
65°	1431	1738	1918
70°	1325	1747	1969
75°	1187	1780	2080
80°	959	1886	2035
85°	722	1656	1613



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.0	3.3
10°-20°	411.4	9.5
20°-30°	618.4	14.3
30°-40°	736.6	17.0
40°-50°	753.9	17.4
50°-60°	678.7	15.7
60°-70°	533.0	12.3
70°-80°	345.9	8.0
80°-90°	107.0	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°	1173.8	27.1
0°-40°	1910.4	44.1
0°-60°	3343.1	77.2
0°-90°	4329.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4329.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1521	1521	1521	1521	1521	
5°	1514	1517	1510	1518	1519	144
15°	1448	1452	1455	1467	1470	408
25°	1316	1327	1341	1363	1367	606
35°	1137	1151	1178	1207	1216	709
45°	917	939	980	1018	1026	707
55°	683	714	766	806	814	613
65°	450	484	546	591	602	448
75°	228	272	342	389	400	242
85°	47	87	107	104	104	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1520.8	1520.8	1520.8	1520.8	1520.8
2.5°	1522.2	1522.2	1515.3	1522.2	1523.6
5°	1513.9	1516.7	1509.8	1518.1	1519.4
7.5°	1505.7	1505.7	1501.6	1509.8	1511.2
10°	1490.6	1491.9	1490.6	1500.2	1501.6
12.5°	1471.3	1474.1	1475.4	1485.1	1486.4
15°	1447.9	1452.1	1454.8	1467.2	1469.9
17.5°	1421.8	1425.9	1432.8	1446.6	1449.3
20°	1390.2	1395.7	1403.9	1421.8	1425.9
22.5°	1355.8	1361.3	1375.1	1391.6	1398.4
25°	1315.9	1326.9	1340.7	1362.7	1366.8
27.5°	1276.0	1285.7	1303.5	1326.9	1332.4
30°	1229.3	1244.4	1266.4	1289.8	1295.3
32.5°	1183.9	1199.0	1225.2	1249.9	1256.8
35°	1137.2	1150.9	1178.4	1207.3	1215.5
37.5°	1083.5	1101.4	1131.7	1160.5	1168.8
40°	1027.2	1049.2	1083.5	1113.8	1123.4
42.5°	973.5	996.9	1031.3	1064.3	1075.3
45°	917.2	939.2	980.4	1017.5	1025.8
47.5°	859.4	884.2	928.2	965.3	979.0
50°	801.7	827.8	874.5	913.0	921.3
52.5°	743.9	771.4	820.9	862.2	866.3
55°	683.4	713.7	765.9	805.8	814.0
57.5°	628.4	654.5	710.9	752.2	761.8
60°	567.9	596.8	657.3	695.8	708.2
62.5°	510.1	540.4	603.6	642.1	653.1
65°	449.6	484.0	545.9	591.3	602.3
67.5°	397.4	430.4	496.4	540.4	551.4
70°	336.9	374.0	444.1	489.5	500.5
72.5°	284.6	323.1	393.3	437.3	453.8
75°	228.3	272.3	342.4	389.1	400.1
77.5°	173.3	224.1	295.6	331.4	331.4
80°	123.8	177.4	243.4	259.9	262.6
82.5°	81.1	133.4	180.1	178.8	178.8
85°	46.8	86.6	107.3	104.5	104.5
87.5°	17.9	35.8	38.5	38.5	37.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)