

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: P310921

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP125-W2A-U-6500K**

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: P310921  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
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-CP125-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET  
Light Source: (168) 6500K 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**

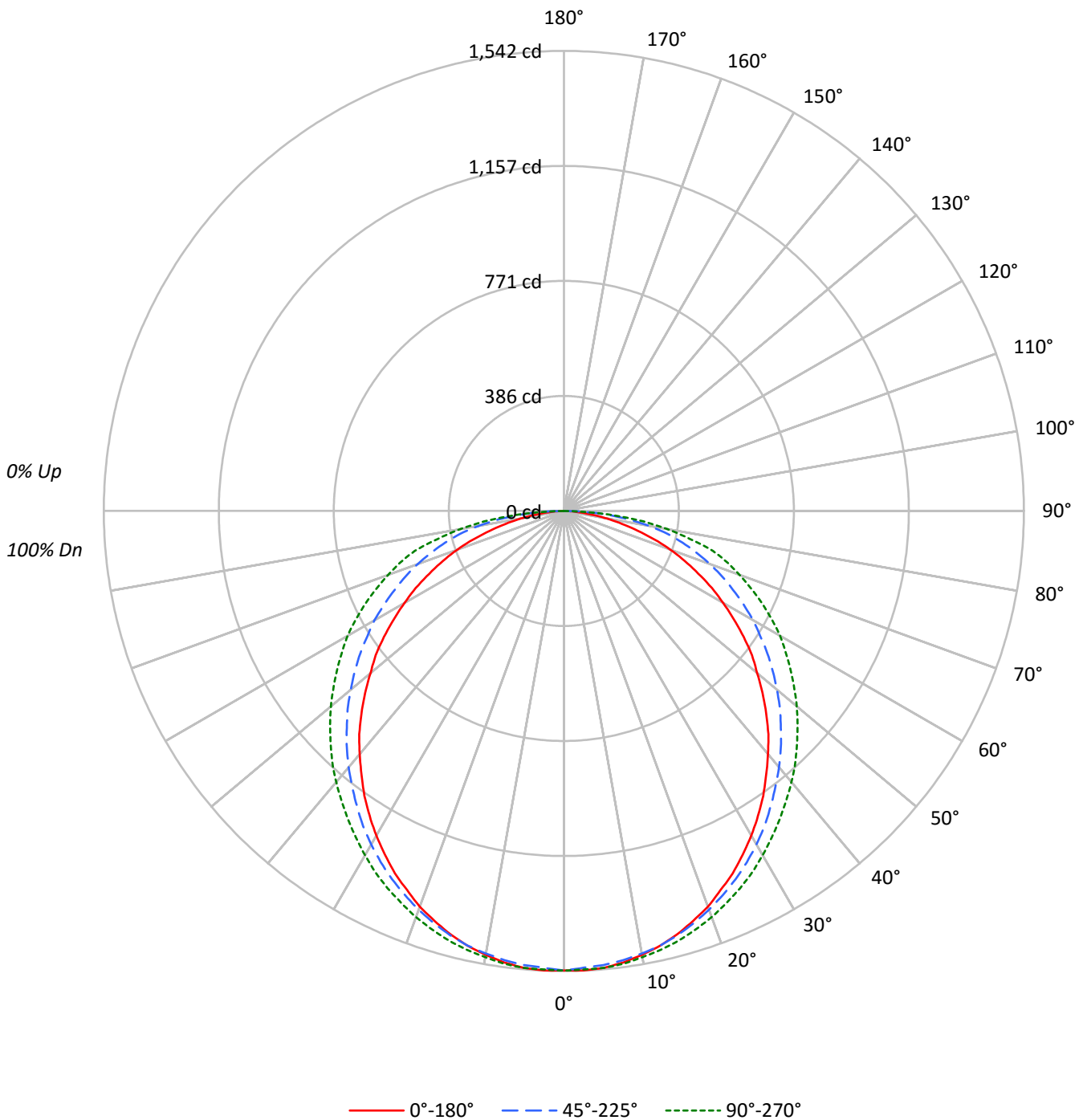
Lumens per Lamp: N/A  
Luminaire Lumens: 4670.0 lumens  
Efficiency: N/A  
Efficacy: 104.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 44.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2072	2072	2072
5°	2076	2063	2076
10°	2064	2058	2075
15°	2046	2050	2076
20°	2021	2037	2074
25°	1990	2022	2072
30°	1952	2005	2070
35°	1914	1985	2072
40°	1870	1970	2085
45°	1825	1958	2102
50°	1771	1953	2134
55°	1727	1955	2177
60°	1660	1972	2252
65°	1584	1993	2333
70°	1500	2054	2463
75°	1337	2142	2690
80°	1141	2269	2749
85°	814	2248	2631



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.8	3.1
10°-20°	416.8	8.9
20°-30°	629.5	13.5
30°-40°	758.7	16.2
40°-50°	796.5	17.1
50°-60°	745.2	16.0
60°-70°	615.4	13.2
70°-80°	419.3	9.0
80°-90°	143.0	3.1
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°	1192.0	25.5
0°-40°	1950.7	41.8
0°-60°	3492.3	74.8
0°-90°	4670.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4670.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1540	1540	1540	1540	1540	
5°	1537	1536	1528	1537	1537	146
15°	1469	1470	1472	1487	1490	414
25°	1340	1346	1362	1388	1396	617
35°	1165	1178	1208	1249	1261	728
45°	959	979	1029	1085	1105	740
55°	736	765	834	902	928	657
65°	497	539	626	705	733	493
75°	257	316	412	490	518	274
85°	53	104	146	164	170	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1540.1	1540.1	1540.1	1540.1	1540.1
2.5°	1541.7	1540.1	1532.4	1540.1	1538.6
5°	1537.0	1535.5	1527.7	1537.0	1537.0
7.5°	1526.2	1526.2	1518.4	1529.3	1530.8
10°	1510.7	1510.7	1506.0	1518.4	1518.4
12.5°	1492.1	1492.1	1492.1	1504.5	1506.0
15°	1468.9	1470.4	1472.0	1487.4	1490.5
17.5°	1441.0	1444.1	1448.7	1467.3	1470.4
20°	1411.5	1414.6	1422.4	1444.1	1448.7
22.5°	1374.3	1382.1	1392.9	1417.7	1422.4
25°	1340.2	1346.4	1361.9	1388.3	1396.0
27.5°	1298.4	1307.7	1327.9	1355.7	1366.6
30°	1256.6	1265.9	1290.7	1323.2	1332.5
32.5°	1211.6	1225.6	1251.9	1286.0	1296.9
35°	1165.2	1177.6	1208.5	1248.8	1261.2
37.5°	1114.0	1131.1	1165.2	1208.5	1224.0
40°	1064.5	1083.0	1121.8	1168.3	1186.9
42.5°	1014.9	1033.5	1076.8	1129.5	1148.1
45°	959.1	979.2	1028.8	1084.6	1104.7
47.5°	903.3	928.1	982.3	1041.2	1062.9
50°	846.0	873.9	932.8	994.7	1019.5
52.5°	794.9	821.2	883.2	949.8	973.0
55°	736.0	765.4	833.6	901.8	928.1
57.5°	675.5	708.1	780.9	855.3	881.6
60°	616.7	652.3	732.9	807.2	836.7
62.5°	559.3	595.0	678.6	756.1	785.6
65°	497.4	539.2	626.0	705.0	732.9
67.5°	438.5	483.4	574.8	652.3	680.2
70°	381.2	424.5	522.2	598.1	626.0
72.5°	319.2	368.8	466.4	545.4	574.8
75°	257.2	316.1	412.1	489.6	517.5
77.5°	199.9	260.3	356.4	419.9	433.8
80°	147.2	209.2	292.8	337.8	354.8
82.5°	94.5	156.5	223.1	255.7	269.6
85°	52.7	103.8	145.6	164.2	170.4
87.5°	21.7	44.9	58.9	66.6	66.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)