

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: P311590

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-CP125-W2A-U-3500K**

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: P311590  
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-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (168) 3500K 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**

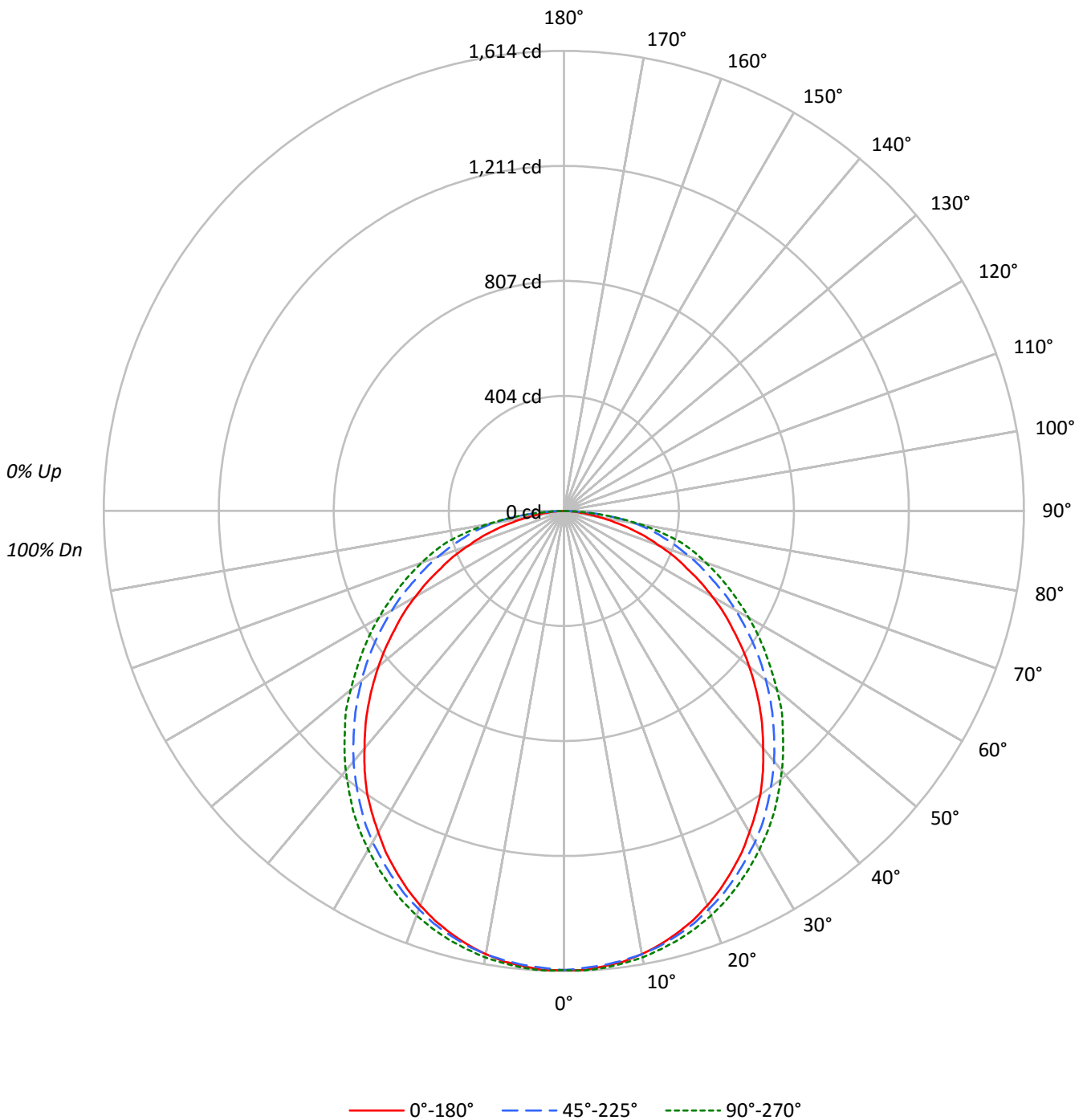
Lumens per Lamp: N/A  
Luminaire Lumens: 4585.0 lumens  
Efficiency: N/A  
Efficacy: 106.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 42.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2167	2167	2167
5°	2166	2160	2174
10°	2157	2157	2173
15°	2136	2146	2169
20°	2108	2129	2163
25°	2069	2108	2149
30°	2023	2084	2131
35°	1978	2050	2115
40°	1911	2016	2090
45°	1848	1976	2067
50°	1777	1939	2043
55°	1698	1903	2023
60°	1619	1873	2018
65°	1516	1841	2031
70°	1404	1851	2085
75°	1257	1885	2203
80°	1016	1998	2156
85°	764	1754	1709



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.5	3.3
10°-20°	435.7	9.5
20°-30°	655.0	14.3
30°-40°	780.2	17.0
40°-50°	798.5	17.4
50°-60°	718.9	15.7
60°-70°	564.5	12.3
70°-80°	366.4	8.0
80°-90°	113.3	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°	1243.2	27.1
0°-40°	2023.4	44.1
0°-60°	3540.7	77.2
0°-90°	4585.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4585.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1611	1611	1611	1611	1611	
5°	1604	1606	1599	1608	1609	152
15°	1534	1538	1541	1554	1557	432
25°	1394	1405	1420	1443	1448	642
35°	1204	1219	1248	1279	1287	751
45°	971	995	1038	1078	1086	749
55°	724	756	811	853	862	649
65°	476	513	578	626	638	474
75°	242	288	363	412	424	256
85°	50	92	114	111	111	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1610.7	1610.7	1610.7	1610.7	1610.7
2.5°	1612.2	1612.2	1604.9	1612.2	1613.7
5°	1603.5	1606.4	1599.1	1607.8	1609.3
7.5°	1594.7	1594.7	1590.4	1599.1	1600.5
10°	1578.7	1580.2	1578.7	1588.9	1590.4
12.5°	1558.3	1561.2	1562.7	1572.9	1574.3
15°	1533.6	1537.9	1540.8	1553.9	1556.9
17.5°	1505.9	1510.3	1517.5	1532.1	1535.0
20°	1472.4	1478.2	1486.9	1505.9	1510.3
22.5°	1436.0	1441.8	1456.4	1473.8	1481.1
25°	1393.7	1405.4	1420.0	1443.3	1447.6
27.5°	1351.5	1361.7	1380.6	1405.4	1411.2
30°	1302.0	1318.0	1341.3	1366.1	1371.9
32.5°	1253.9	1270.0	1297.6	1323.8	1331.1
35°	1204.4	1219.0	1248.1	1278.7	1287.4
37.5°	1147.6	1166.5	1198.6	1229.2	1237.9
40°	1087.9	1111.2	1147.6	1179.7	1189.9
42.5°	1031.1	1055.9	1092.3	1127.2	1138.9
45°	971.4	994.7	1038.4	1077.7	1086.4
47.5°	910.2	936.4	983.0	1022.4	1036.9
50°	849.1	876.7	926.2	967.0	975.8
52.5°	787.9	817.0	869.5	913.1	917.5
55°	723.8	755.9	811.2	853.4	862.2
57.5°	665.6	693.2	752.9	796.6	806.8
60°	601.5	632.1	696.1	736.9	750.0
62.5°	540.3	572.4	639.3	680.1	691.8
65°	476.2	512.6	578.2	626.2	637.9
67.5°	420.9	455.8	525.7	572.4	584.0
70°	356.8	396.1	470.4	518.5	530.1
72.5°	301.5	342.2	416.5	463.1	480.6
75°	241.8	288.4	362.6	412.2	423.8
77.5°	183.5	237.4	313.1	351.0	351.0
80°	131.1	187.9	257.8	275.3	278.2
82.5°	85.9	141.3	190.8	189.3	189.3
85°	49.5	91.8	113.6	110.7	110.7
87.5°	18.9	37.9	40.8	40.8	39.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)