

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: P314385

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-S-CP250-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: P314385  
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-L83050-S-CP250-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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**

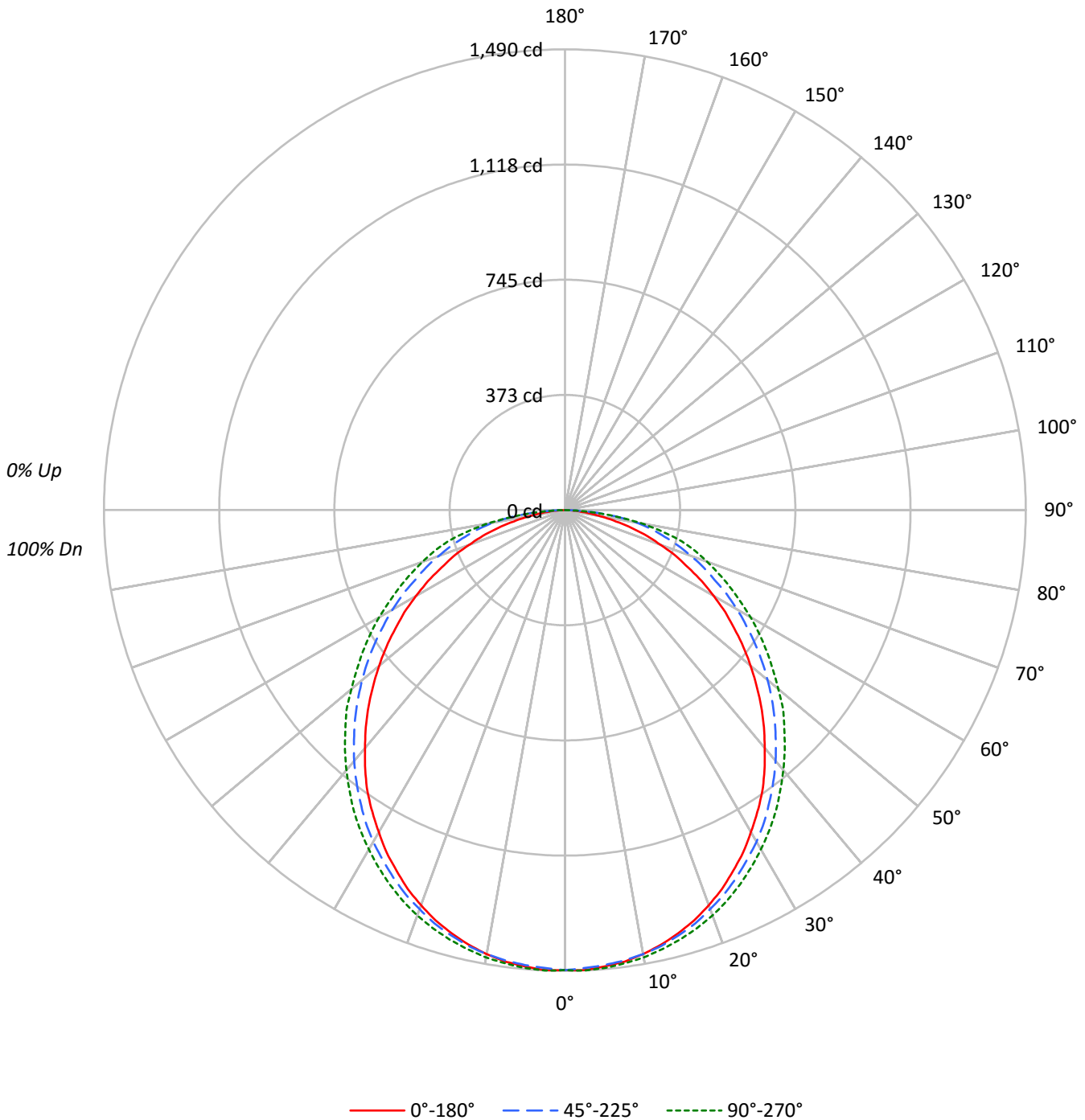
Lumens per Lamp: N/A  
Luminaire Lumens: 4235.0 lumens  
Efficiency: N/A  
Efficacy: 110.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	2002	2002	2002
5°	2000	1995	2008
10°	1992	1992	2007
15°	1973	1982	2003
20°	1947	1966	1997
25°	1911	1947	1985
30°	1868	1925	1969
35°	1827	1894	1953
40°	1765	1862	1930
45°	1707	1825	1909
50°	1641	1791	1887
55°	1568	1758	1868
60°	1495	1730	1864
65°	1401	1700	1876
70°	1297	1709	1926
75°	1161	1742	2035
80°	938	1845	1991
85°	706	1619	1578



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.8	3.3
10°-20°	402.5	9.5
20°-30°	605.0	14.3
30°-40°	720.6	17.0
40°-50°	737.5	17.4
50°-60°	664.0	15.7
60°-70°	521.4	12.3
70°-80°	338.4	8.0
80°-90°	104.7	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°	1148.3	27.1
0°-40°	1868.9	44.1
0°-60°	3270.5	77.2
0°-90°	4235.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4235.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1488	1488	1488	1488	1488	
5°	1481	1484	1477	1485	1486	141
15°	1416	1420	1423	1435	1438	399
25°	1287	1298	1312	1333	1337	593
35°	1112	1126	1153	1181	1189	694
45°	897	919	959	995	1004	692
55°	669	698	749	788	796	599
65°	440	474	534	578	589	438
75°	223	266	335	381	392	236
85°	46	85	105	102	102	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1487.8	1487.8	1487.8	1487.8	1487.8
2.5°	1489.1	1489.1	1482.4	1489.1	1490.5
5°	1481.1	1483.7	1477.0	1485.1	1486.4
7.5°	1473.0	1473.0	1469.0	1477.0	1478.4
10°	1458.2	1459.5	1458.2	1467.6	1469.0
12.5°	1439.4	1442.0	1443.4	1452.8	1454.2
15°	1416.5	1420.5	1423.2	1435.3	1438.0
17.5°	1390.9	1395.0	1401.7	1415.1	1417.8
20°	1360.0	1365.4	1373.4	1390.9	1395.0
22.5°	1326.4	1331.7	1345.2	1361.3	1368.1
25°	1287.3	1298.1	1311.6	1333.1	1337.1
27.5°	1248.3	1257.8	1275.2	1298.1	1303.5
30°	1202.6	1217.4	1238.9	1261.8	1267.2
32.5°	1158.2	1173.0	1198.6	1222.8	1229.5
35°	1112.5	1125.9	1152.8	1181.1	1189.2
37.5°	1060.0	1077.5	1107.1	1135.3	1143.4
40°	1004.9	1026.4	1060.0	1089.6	1099.0
42.5°	952.4	975.3	1008.9	1041.2	1051.9
45°	897.2	918.8	959.1	995.4	1003.5
47.5°	840.7	865.0	908.0	944.3	957.8
50°	784.2	809.8	855.5	893.2	901.3
52.5°	727.7	754.7	803.1	843.4	847.5
55°	668.6	698.2	749.3	788.3	796.4
57.5°	614.8	640.3	695.5	735.8	745.2
60°	555.6	583.8	643.0	680.7	692.8
62.5°	499.1	528.7	590.5	628.2	639.0
65°	439.9	473.5	534.0	578.4	589.2
67.5°	388.8	421.0	485.6	528.7	539.4
70°	329.6	365.9	434.5	478.9	489.7
72.5°	278.5	316.1	384.7	427.8	443.9
75°	223.3	266.3	335.0	380.7	391.5
77.5°	169.5	219.3	289.2	324.2	324.2
80°	121.1	173.5	238.1	254.2	256.9
82.5°	79.4	130.5	176.2	174.9	174.9
85°	45.7	84.7	104.9	102.2	102.2
87.5°	17.5	35.0	37.7	37.7	36.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)