

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: P313018

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-S-CA08-W2A-U-4500K**

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: P313018  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-44HE-UNV-L83050-S-CA08-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 4500K 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: 4449.0 lumens  
Efficiency: N/A  
Efficacy: 114.1 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

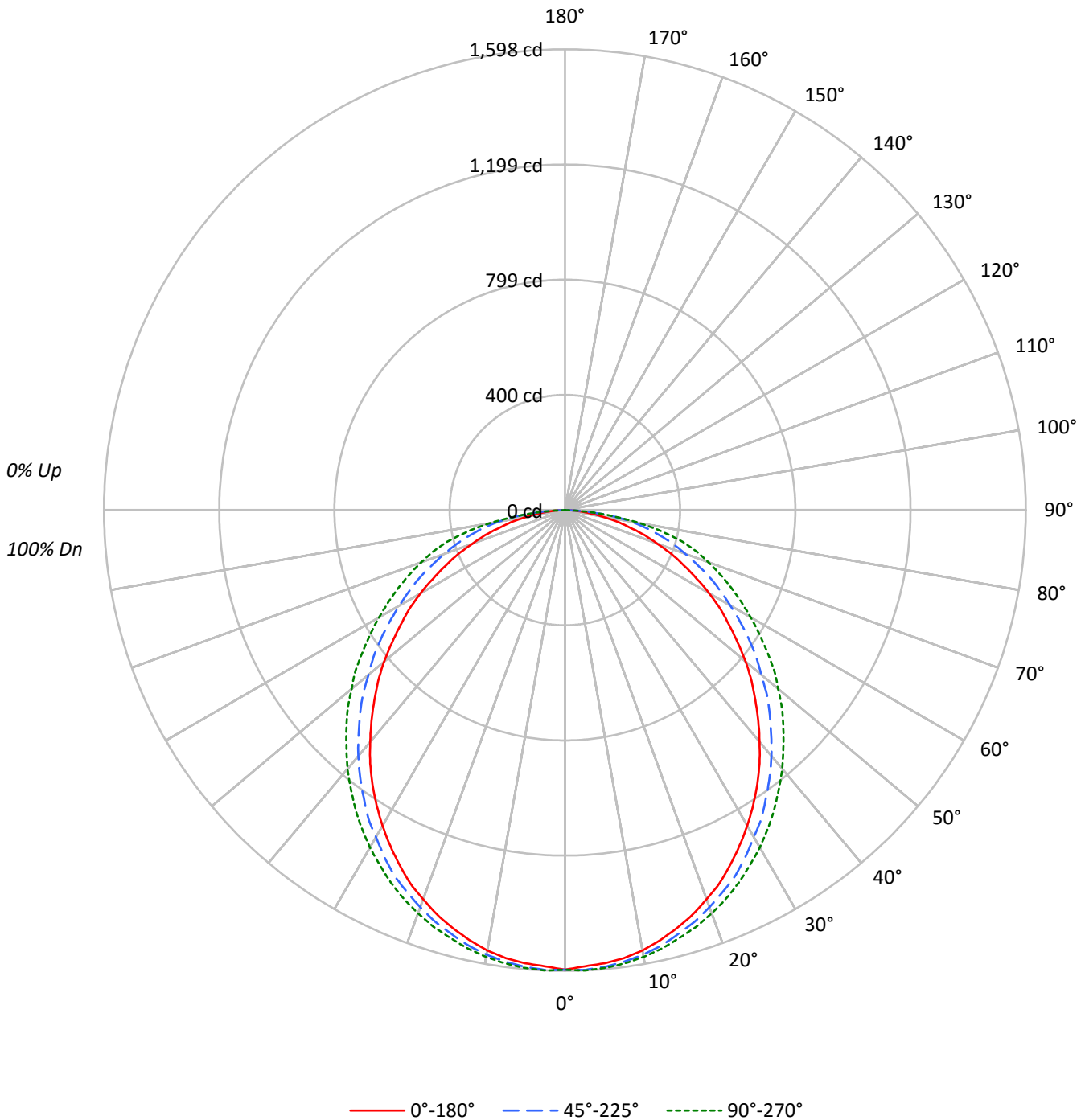
Input Watts (W): 39  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	4290	4290	4290
5°	4262	4295	4306
10°	4237	4277	4300
15°	4181	4239	4279
20°	4114	4197	4262
25°	4031	4154	4234
30°	3928	4070	4199
35°	3819	3996	4160
40°	3690	3916	4120
45°	3555	3824	4076
50°	3424	3719	4041
55°	3263	3652	4012
60°	3117	3564	3999
65°	2908	3542	4045
70°	2678	3511	4164
75°	2417	3561	4381
80°	2091	3667	4117
85°	1729	3075	3075



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.8	3.4
10°-20°	429.0	9.6
20°-30°	642.0	14.4
30°-40°	760.2	17.1
40°-50°	774.8	17.4
50°-60°	694.4	15.6
60°-70°	543.7	12.2
70°-80°	350.6	7.9
80°-90°	103.5	2.3
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°	1221.8	27.5
0°-40°	1982.0	44.5
0°-60°	3451.2	77.6
0°-90°	4449.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4449.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1594	1594	1594	1594	1594	
5°	1578	1582	1590	1592	1594	150
15°	1501	1509	1522	1534	1536	423
25°	1358	1370	1399	1418	1426	625
35°	1162	1177	1216	1254	1266	726
45°	934	955	1005	1057	1071	721
55°	695	718	778	832	855	623
65°	457	484	556	610	635	454
75°	232	268	342	401	421	249
85°	56	77	100	100	100	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1594.2	1594.2	1594.2	1594.2	1594.2
2.5°	1583.8	1588.0	1596.3	1598.4	1598.4
5°	1577.6	1581.8	1590.1	1592.1	1594.2
7.5°	1567.2	1569.3	1579.7	1583.8	1585.9
10°	1550.6	1554.8	1565.2	1571.4	1573.5
12.5°	1527.8	1534.0	1546.5	1554.8	1556.9
15°	1500.8	1509.1	1521.6	1534.0	1536.1
17.5°	1471.7	1480.0	1496.7	1511.2	1515.3
20°	1436.5	1446.8	1465.5	1482.1	1488.3
22.5°	1401.2	1409.5	1432.3	1453.1	1459.3
25°	1357.6	1370.0	1399.1	1417.8	1426.1
27.5°	1311.9	1326.4	1355.5	1380.4	1388.7
30°	1264.2	1278.7	1309.8	1341.0	1351.3
32.5°	1214.3	1231.0	1268.3	1299.5	1309.8
35°	1162.4	1177.0	1216.4	1253.8	1266.2
37.5°	1108.5	1120.9	1166.6	1206.0	1218.5
40°	1050.4	1067.0	1114.7	1160.4	1172.8
42.5°	992.2	1010.9	1058.7	1108.5	1120.9
45°	934.1	954.9	1004.7	1056.6	1071.1
47.5°	878.1	894.7	950.7	1000.5	1021.3
50°	817.9	834.5	888.4	944.5	965.2
52.5°	755.6	778.4	836.5	890.5	915.4
55°	695.4	718.2	778.4	832.4	855.2
57.5°	639.3	658.0	720.3	776.3	799.2
60°	579.1	595.8	662.2	722.4	743.1
62.5°	514.8	539.7	608.2	664.3	689.2
65°	456.7	483.7	556.3	610.3	635.2
67.5°	402.7	427.6	498.2	556.3	583.3
70°	340.4	373.6	446.3	504.4	529.3
72.5°	290.6	319.7	394.4	452.5	479.5
75°	232.5	267.8	342.5	400.6	421.4
77.5°	184.7	220.0	290.6	336.3	346.7
80°	134.9	170.2	236.6	259.5	265.7
82.5°	91.3	124.5	170.2	176.4	178.5
85°	56.0	76.8	99.6	99.6	99.6
87.5°	27.0	31.1	35.3	33.2	33.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)