

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: P309100

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CA08-W2A-U-5000K**

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: P309100  
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-L82765-S-CA08-W2A-U-5000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 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**

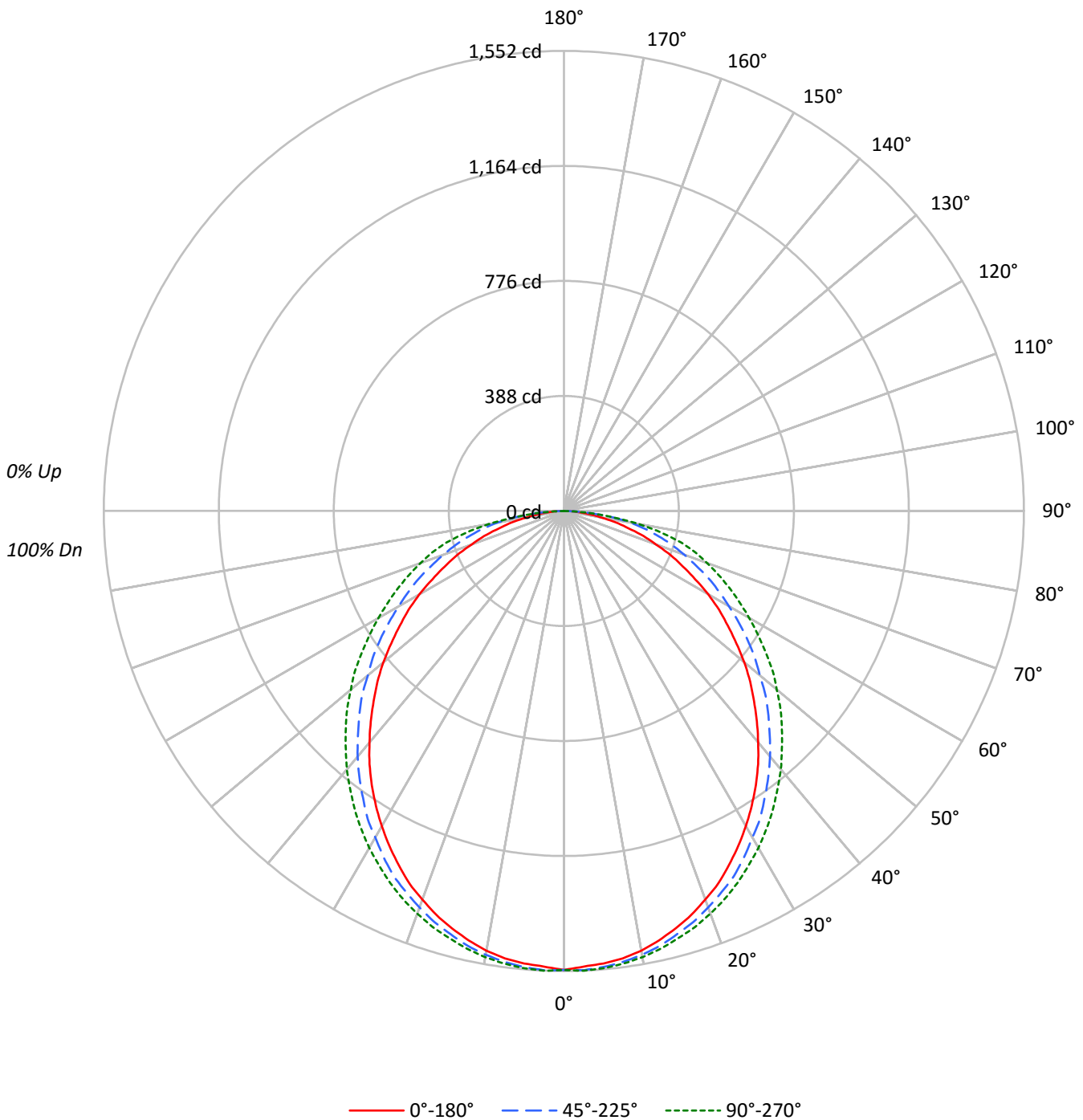
Lumens per Lamp: N/A  
Luminaire Lumens: 4321.0 lumens  
Efficiency: N/A  
Efficacy: 113.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	4166	4166	4166
5°	4139	4172	4182
10°	4115	4154	4176
15°	4061	4117	4156
20°	3995	4076	4139
25°	3915	4035	4112
30°	3815	3953	4078
35°	3709	3881	4040
40°	3583	3803	4001
45°	3452	3714	3959
50°	3325	3612	3925
55°	3169	3547	3897
60°	3027	3461	3885
65°	2824	3440	3928
70°	2601	3411	4045
75°	2348	3459	4256
80°	2030	3561	4000
85°	1680	2989	2989



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.4	3.4
10°-20°	416.7	9.6
20°-30°	623.5	14.4
30°-40°	738.4	17.1
40°-50°	752.5	17.4
50°-60°	674.4	15.6
60°-70°	528.0	12.2
70°-80°	340.5	7.9
80°-90°	100.6	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°	1186.6	27.5
0°-40°	1925.0	44.5
0°-60°	3351.9	77.6
0°-90°	4321.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4321.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1548	1548	1548	1548	1548	
5°	1532	1536	1544	1546	1548	145
15°	1458	1466	1478	1490	1492	411
25°	1318	1331	1359	1377	1385	607
35°	1129	1143	1181	1218	1230	706
45°	907	927	976	1026	1040	701
55°	675	698	756	808	831	606
65°	444	470	540	593	617	441
75°	226	260	333	389	409	242
85°	54	75	97	97	97	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1548.3	1548.3	1548.3	1548.3	1548.3
2.5°	1538.3	1542.3	1550.4	1552.4	1552.4
5°	1532.2	1536.3	1544.3	1546.3	1548.3
7.5°	1522.1	1524.2	1534.2	1538.3	1540.3
10°	1506.0	1510.0	1520.1	1526.2	1528.2
12.5°	1483.8	1489.9	1502.0	1510.0	1512.1
15°	1457.6	1465.7	1477.8	1489.9	1491.9
17.5°	1429.4	1437.5	1453.6	1467.7	1471.7
20°	1395.1	1405.2	1423.4	1439.5	1445.5
22.5°	1360.9	1368.9	1391.1	1411.3	1417.3
25°	1318.5	1330.6	1358.8	1377.0	1385.0
27.5°	1274.2	1288.3	1316.5	1340.7	1348.8
30°	1227.8	1241.9	1272.1	1302.4	1312.5
32.5°	1179.4	1195.5	1231.8	1262.1	1272.1
35°	1129.0	1143.1	1181.4	1217.7	1229.8
37.5°	1076.6	1088.7	1133.0	1171.3	1183.4
40°	1020.1	1036.3	1082.6	1127.0	1139.1
42.5°	963.7	981.8	1028.2	1076.6	1088.7
45°	907.2	927.4	975.8	1026.2	1040.3
47.5°	852.8	868.9	923.4	971.8	991.9
50°	794.3	810.5	862.9	917.3	937.5
52.5°	733.9	756.0	812.5	864.9	889.1
55°	675.4	697.6	756.0	808.4	830.6
57.5°	621.0	639.1	699.6	754.0	776.2
60°	562.5	578.6	643.1	701.6	721.8
62.5°	500.0	524.2	590.7	645.1	669.3
65°	443.5	469.7	540.3	592.7	616.9
67.5°	391.1	415.3	483.9	540.3	566.5
70°	330.6	362.9	433.5	489.9	514.1
72.5°	282.3	310.5	383.1	439.5	465.7
75°	225.8	260.1	332.7	389.1	409.3
77.5°	179.4	213.7	282.3	326.6	336.7
80°	131.0	165.3	229.8	252.0	258.1
82.5°	88.7	121.0	165.3	171.4	173.4
85°	54.4	74.6	96.8	96.8	96.8
87.5°	26.2	30.2	34.3	32.3	32.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)