

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: P309123

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CP187-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: P309123  
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-CP187-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB 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**

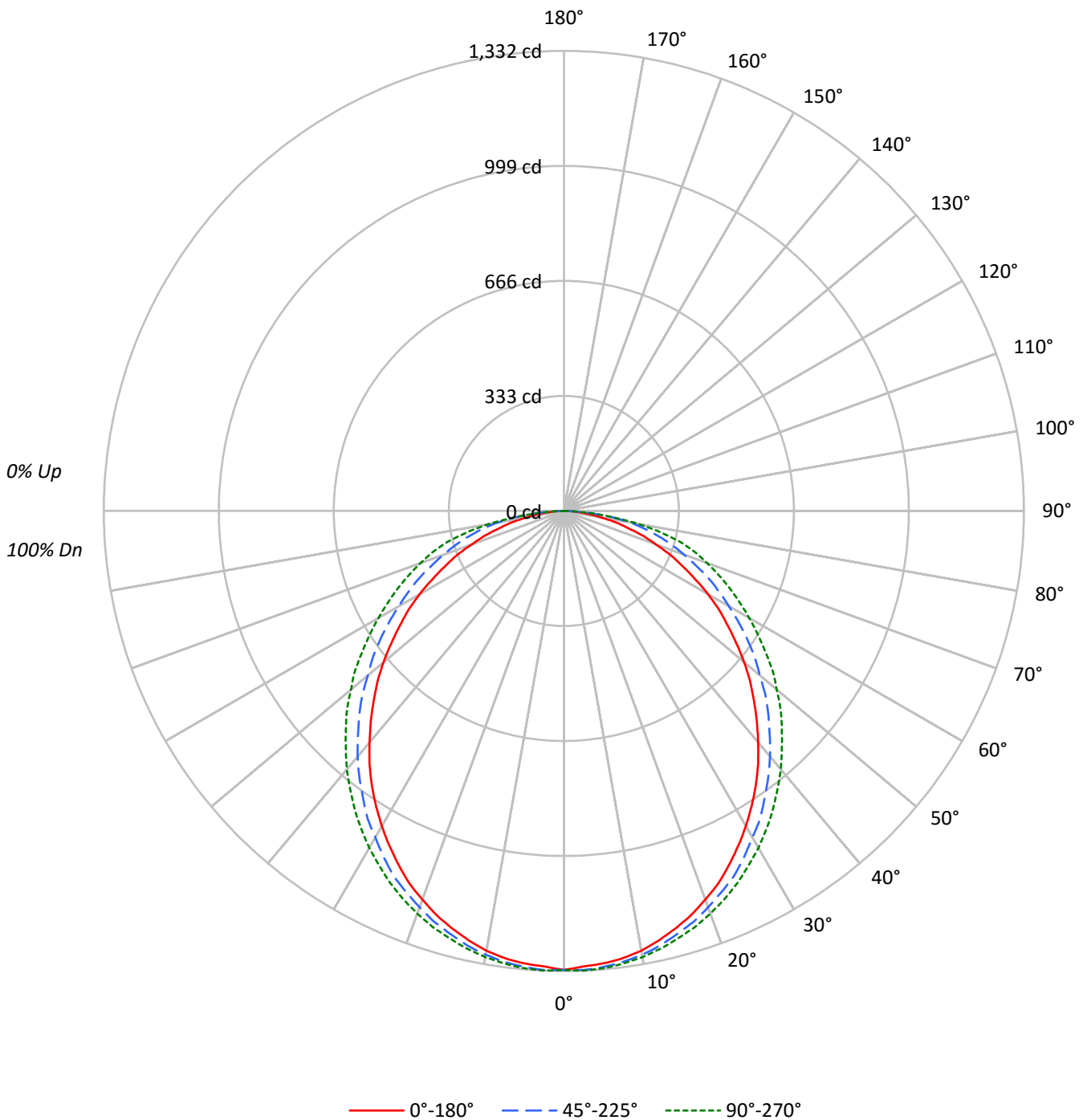
Lumens per Lamp: N/A  
Luminaire Lumens: 3708.0 lumens  
Efficiency: N/A  
Efficacy: 100.5 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	3576	3576	3576
5°	3552	3580	3589
10°	3531	3565	3583
15°	3485	3533	3567
20°	3428	3498	3552
25°	3360	3462	3529
30°	3274	3392	3500
35°	3183	3330	3467
40°	3075	3263	3434
45°	2963	3187	3397
50°	2853	3100	3368
55°	2719	3044	3344
60°	2598	2970	3334
65°	2423	2953	3371
70°	2232	2927	3471
75°	2015	2968	3651
80°	1743	3056	3431
85°	1442	2563	2563



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.6	3.4
10°-20°	357.6	9.6
20°-30°	535.0	14.4
30°-40°	633.6	17.1
40°-50°	645.7	17.4
50°-60°	578.8	15.6
60°-70°	453.1	12.2
70°-80°	292.2	7.9
80°-90°	86.3	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°	1018.3	27.5
0°-40°	1651.9	44.5
0°-60°	2876.4	77.6
0°-90°	3708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3708.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1329	1329	1329	1329	1329	
5°	1315	1318	1325	1327	1329	125
15°	1251	1258	1268	1278	1280	353
25°	1132	1142	1166	1182	1189	521
35°	969	981	1014	1045	1055	606
45°	778	796	837	881	893	601
55°	580	599	649	694	713	520
65°	381	403	464	509	529	378
75°	194	223	286	334	351	208
85°	47	64	83	83	83	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1328.7	1328.7	1328.7	1328.7	1328.7
2.5°	1320.0	1323.5	1330.4	1332.2	1332.2
5°	1314.9	1318.3	1325.2	1327.0	1328.7
7.5°	1306.2	1307.9	1316.6	1320.0	1321.8
10°	1292.4	1295.8	1304.5	1309.7	1311.4
12.5°	1273.3	1278.5	1288.9	1295.8	1297.6
15°	1250.8	1257.8	1268.1	1278.5	1280.3
17.5°	1226.6	1233.5	1247.4	1259.5	1262.9
20°	1197.2	1205.9	1221.4	1235.3	1240.5
22.5°	1167.8	1174.7	1193.7	1211.0	1216.2
25°	1131.5	1141.8	1166.1	1181.6	1188.6
27.5°	1093.4	1105.5	1129.7	1150.5	1157.4
30°	1053.6	1065.7	1091.7	1117.6	1126.3
32.5°	1012.1	1025.9	1057.1	1083.0	1091.7
35°	968.8	980.9	1013.8	1045.0	1055.3
37.5°	923.9	934.2	972.3	1005.2	1015.5
40°	875.4	889.3	929.0	967.1	977.5
42.5°	827.0	842.5	882.3	923.9	934.2
45°	778.5	795.8	837.4	880.6	892.7
47.5°	731.8	745.7	792.4	833.9	851.2
50°	681.6	695.5	740.5	787.2	804.5
52.5°	629.7	648.8	697.2	742.2	763.0
55°	579.6	598.6	648.8	693.8	712.8
57.5°	532.9	548.4	600.3	647.0	666.1
60°	482.7	496.5	551.9	602.1	619.4
62.5°	429.1	449.8	506.9	553.6	574.4
65°	380.6	403.1	463.7	508.6	529.4
67.5°	335.6	356.4	415.2	463.7	486.1
70°	283.7	311.4	372.0	420.4	441.2
72.5°	242.2	266.4	328.7	377.2	399.6
75°	193.8	223.2	285.5	333.9	351.2
77.5°	154.0	183.4	242.2	280.3	288.9
80°	112.5	141.9	197.2	216.3	221.4
82.5°	76.1	103.8	141.9	147.1	148.8
85°	46.7	64.0	83.0	83.0	83.0
87.5°	22.5	26.0	29.4	27.7	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)