

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: P308697

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-CA08-W2A-U-5700K**

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: P308697  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-29HE-UNV-L82765-CA08-W2A-U-5700K  
Description: 2'X2' TROFFER LED MODULE, RIBBED 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**

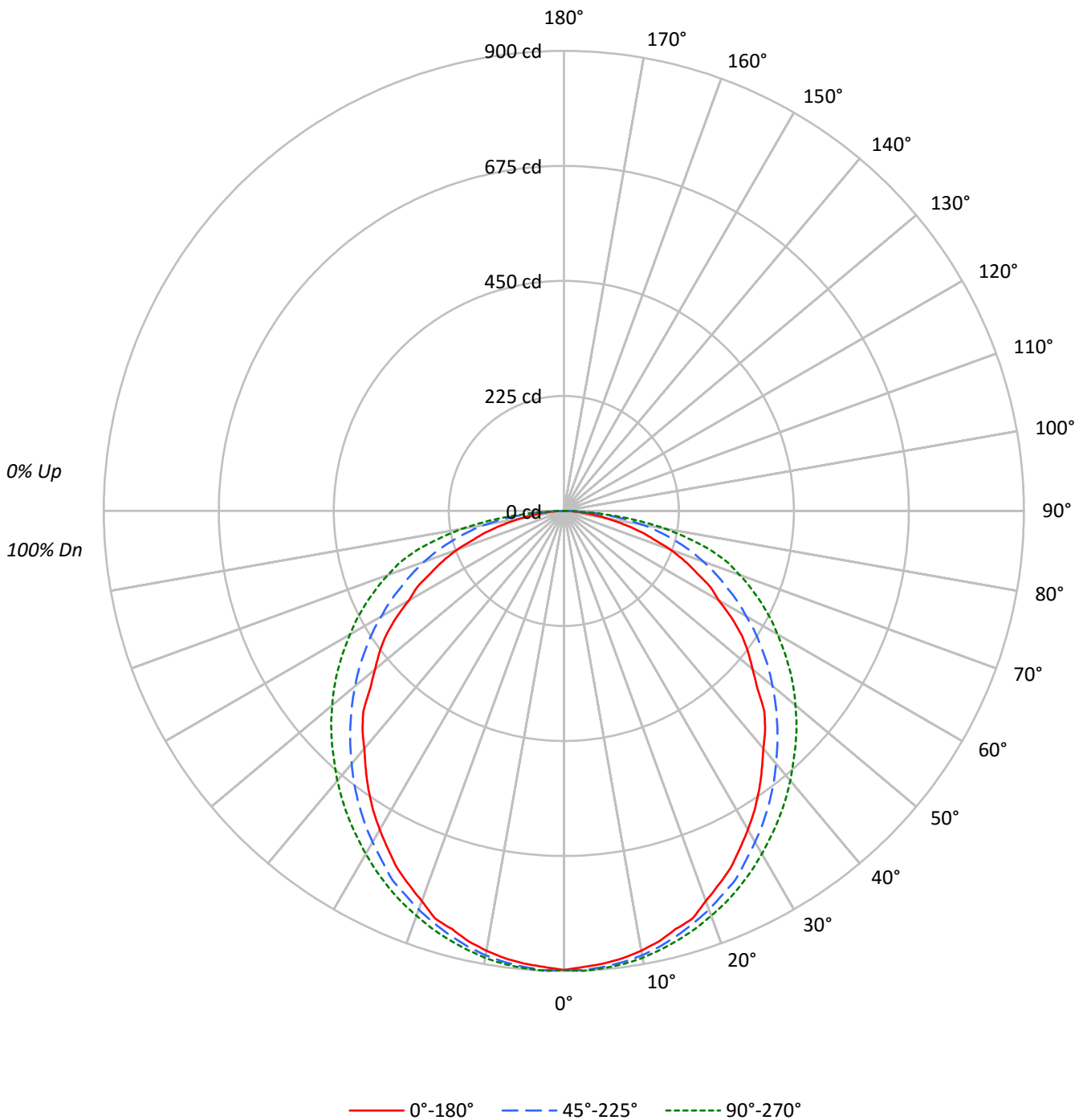
Lumens per Lamp: N/A  
Luminaire Lumens: 2676.0 lumens  
Efficiency: N/A  
Efficacy: 116.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	2416	2416	2416
5°	2401	2418	2425
10°	2387	2411	2425
15°	2359	2394	2419
20°	2325	2377	2413
25°	2289	2362	2411
30°	2237	2324	2408
35°	2188	2297	2411
40°	2133	2268	2421
45°	2111	2247	2442
50°	2016	2231	2477
55°	1995	2223	2530
60°	1882	2220	2599
65°	1827	2234	2716
70°	1754	2287	2882
75°	1598	2357	3103
80°	1370	2441	3137
85°	1108	2334	2689



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.0	3.2
10°-20°	242.4	9.1
20°-30°	364.8	13.6
30°-40°	437.8	16.4
40°-50°	457.6	17.1
50°-60°	426.4	15.9
60°-70°	349.8	13.1
70°-80°	235.7	8.8
80°-90°	76.8	2.9
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°	692.1	25.9
0°-40°	1129.9	42.2
0°-60°	2013.8	75.3
0°-90°	2676.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2676.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	898	898	898	898	898	
5°	889	891	895	896	898	84
15°	847	852	859	867	868	239
25°	771	776	795	807	812	354
35°	666	675	699	724	734	416
45°	555	558	590	626	642	424
55°	425	433	474	519	539	377
65°	287	300	351	402	426	285
75°	154	170	227	278	298	162
85°	36	51	76	88	87	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	897.8	897.8	897.8	897.8	897.8
2.5°	892.7	895.3	899.1	900.4	900.4
5°	888.9	891.4	895.3	896.5	897.8
7.5°	882.5	885.0	890.1	892.7	894.0
10°	873.5	876.0	882.5	886.3	887.6
12.5°	862.0	864.5	872.2	877.3	878.6
15°	846.6	851.7	859.4	867.1	868.4
17.5°	836.3	835.1	845.3	854.3	856.8
20°	812.0	818.4	829.9	840.2	842.7
22.5°	791.5	796.6	812.0	823.5	828.7
25°	771.0	776.1	795.4	806.9	812.0
27.5°	745.4	753.1	771.0	787.7	794.1
30°	719.8	727.5	748.0	767.2	774.9
32.5°	694.2	703.1	724.9	745.4	754.4
35°	666.0	675.0	699.3	723.6	733.9
37.5°	636.5	648.1	673.7	700.6	712.1
40°	607.1	618.6	645.5	676.2	689.1
42.5°	582.8	587.9	618.6	651.9	664.7
45°	554.6	558.4	590.4	626.3	641.7
47.5°	513.6	527.7	562.3	602.0	617.3
50°	481.6	496.9	532.8	575.1	591.7
52.5°	454.7	464.9	504.6	546.9	566.1
55°	425.2	432.9	473.9	518.7	539.2
57.5°	389.4	403.4	444.4	490.5	511.0
60°	349.7	367.6	412.4	462.4	482.9
62.5°	324.0	334.3	383.0	432.9	456.0
65°	286.9	299.7	350.9	402.2	426.5
67.5°	256.2	269.0	321.5	372.7	397.0
70°	222.9	235.7	290.7	342.0	366.3
72.5°	184.4	202.4	260.0	311.2	336.8
75°	153.7	170.3	226.7	277.9	298.4
77.5°	119.1	140.9	193.4	235.7	251.0
80°	88.4	110.1	157.5	188.3	202.4
82.5°	60.2	82.0	117.8	140.9	148.6
85°	35.9	51.2	75.6	88.4	87.1
87.5°	16.7	21.8	30.7	30.7	29.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)