

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: P308990

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CP187-W2A-U-4000K**

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: P308990  
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: 22FCZ2-29HE-UNV-L82765-S-CP187-W2A-U-4000K  
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**

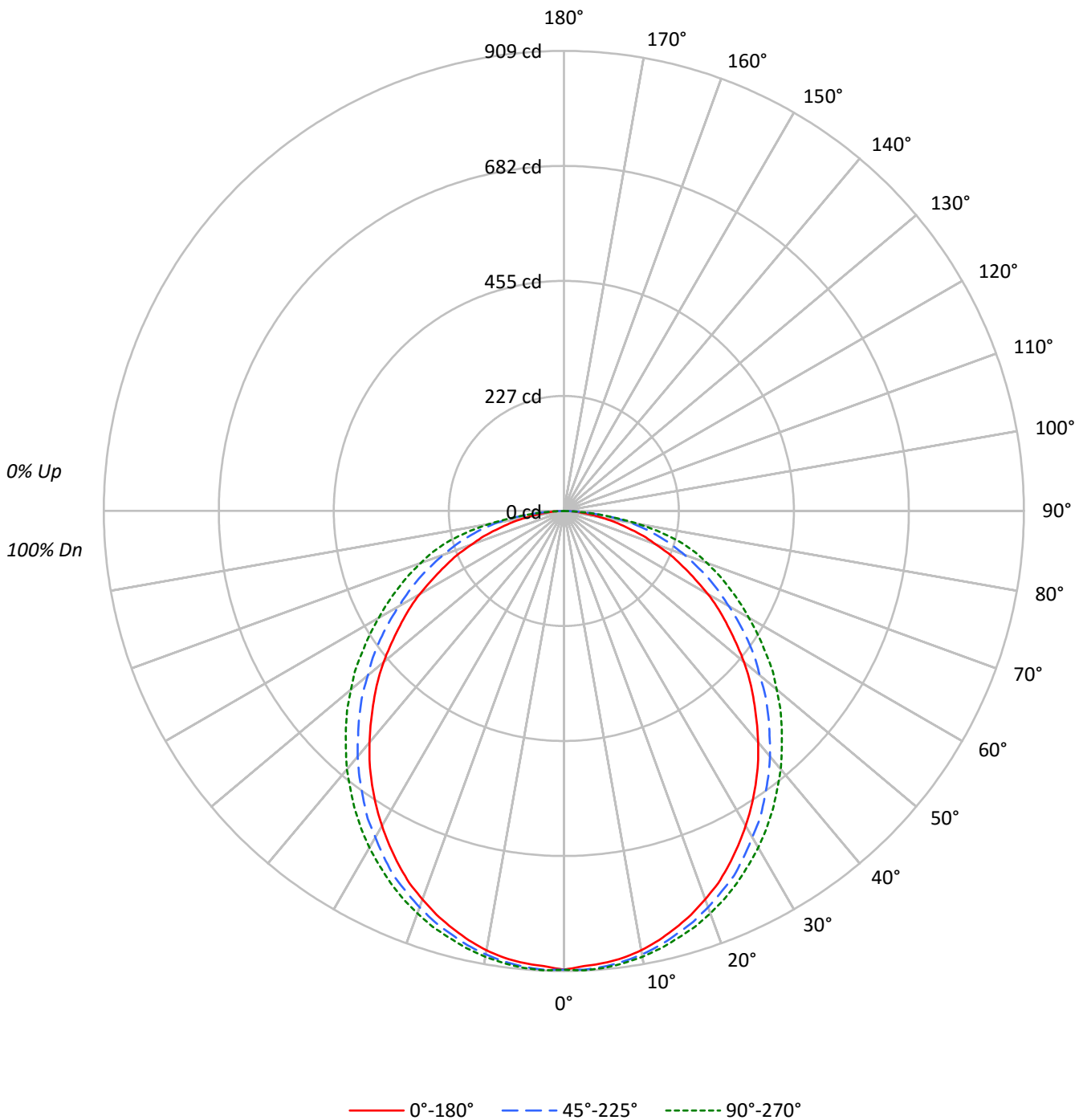
Lumens per Lamp: N/A  
Luminaire Lumens: 2529.0 lumens  
Efficiency: N/A  
Efficacy: 111.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2439	2439	2439
5°	2422	2442	2448
10°	2408	2431	2444
15°	2377	2410	2433
20°	2338	2386	2423
25°	2291	2361	2407
30°	2233	2314	2387
35°	2171	2272	2365
40°	2098	2226	2342
45°	2021	2173	2317
50°	1946	2114	2297
55°	1855	2076	2281
60°	1772	2026	2273
65°	1653	2013	2299
70°	1522	1996	2367
75°	1375	2024	2490
80°	1189	2084	2340
85°	985	1748	1748



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.7	3.4
10°-20°	243.9	9.6
20°-30°	364.9	14.4
30°-40°	432.2	17.1
40°-50°	440.4	17.4
50°-60°	394.7	15.6
60°-70°	309.0	12.2
70°-80°	199.3	7.9
80°-90°	58.9	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°	694.5	27.5
0°-40°	1126.7	44.5
0°-60°	1961.8	77.6
0°-90°	2529.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2529.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	897	899	904	905	906	85
15°	853	858	865	872	873	241
25°	772	779	795	806	811	355
35°	661	669	692	713	720	413
45°	531	543	571	601	609	410
55°	395	408	442	473	486	354
65°	260	275	316	347	361	258
75°	132	152	195	228	240	142
85°	32	44	57	57	57	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	906.2	906.2	906.2	906.2	906.2
2.5°	900.3	902.7	907.4	908.6	908.6
5°	896.8	899.1	903.9	905.0	906.2
7.5°	890.9	892.1	898.0	900.3	901.5
10°	881.4	883.8	889.7	893.2	894.4
12.5°	868.5	872.0	879.1	883.8	885.0
15°	853.1	857.8	864.9	872.0	873.2
17.5°	836.6	841.3	850.8	859.0	861.4
20°	816.5	822.4	833.1	842.5	846.0
22.5°	796.5	801.2	814.2	826.0	829.5
25°	771.7	778.8	795.3	805.9	810.6
27.5°	745.7	754.0	770.5	784.7	789.4
30°	718.6	726.9	744.6	762.3	768.2
32.5°	690.3	699.7	721.0	738.7	744.6
35°	660.8	669.0	691.5	712.7	719.8
37.5°	630.1	637.2	663.1	685.6	692.6
40°	597.1	606.5	633.6	659.6	666.7
42.5°	564.0	574.6	601.8	630.1	637.2
45°	531.0	542.8	571.1	600.6	608.9
47.5°	499.1	508.6	540.4	568.7	580.5
50°	464.9	474.3	505.0	536.9	548.7
52.5°	429.5	442.5	475.5	506.2	520.4
55°	395.3	408.3	442.5	473.2	486.1
57.5°	363.4	374.1	409.5	441.3	454.3
60°	329.2	338.7	376.4	410.6	422.4
62.5°	292.6	306.8	345.7	377.6	391.8
65°	259.6	274.9	316.2	346.9	361.1
67.5°	228.9	243.1	283.2	316.2	331.6
70°	193.5	212.4	253.7	286.7	300.9
72.5°	165.2	181.7	224.2	257.2	272.6
75°	132.2	152.2	194.7	227.7	239.5
77.5°	105.0	125.1	165.2	191.2	197.1
80°	76.7	96.8	134.5	147.5	151.0
82.5°	51.9	70.8	96.8	100.3	101.5
85°	31.9	43.7	56.6	56.6	56.6
87.5°	15.3	17.7	20.1	18.9	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)