

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: P312805

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-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: P312805  
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-L83050-CP187-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, RIBBED 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**

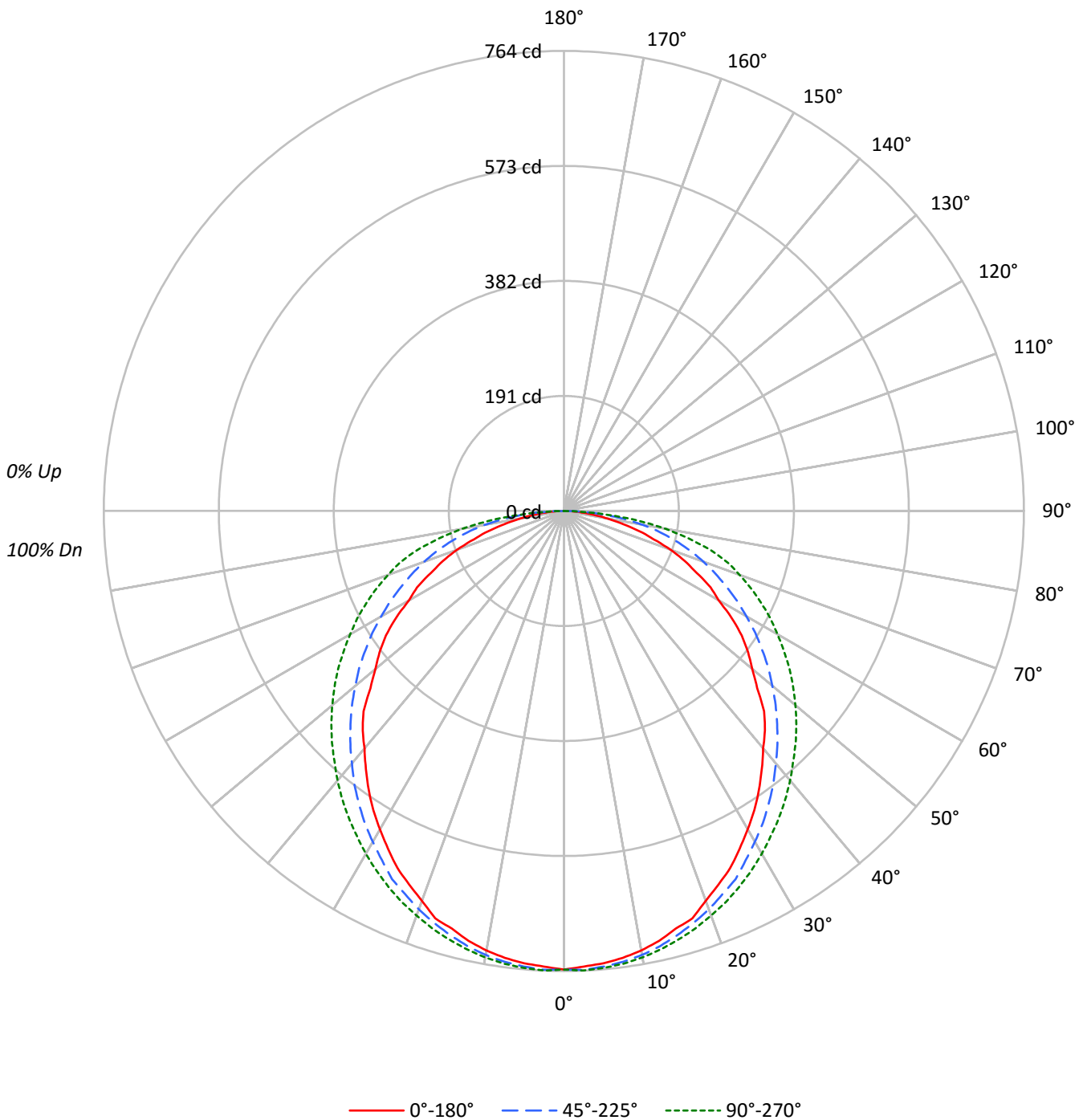
Lumens per Lamp: N/A  
Luminaire Lumens: 2270.0 lumens  
Efficiency: N/A  
Efficacy: 101.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2049	2049	2049
5°	2037	2051	2057
10°	2025	2046	2057
15°	2001	2031	2052
20°	1973	2016	2047
25°	1942	2003	2045
30°	1897	1972	2042
35°	1856	1949	2045
40°	1809	1924	2053
45°	1790	1906	2071
50°	1710	1892	2101
55°	1692	1886	2146
60°	1596	1883	2204
65°	1550	1896	2304
70°	1487	1940	2445
75°	1356	1999	2632
80°	1162	2070	2661
85°	939	1979	2282



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.1	3.2
10°-20°	205.6	9.1
20°-30°	309.4	13.6
30°-40°	371.4	16.4
40°-50°	388.1	17.1
50°-60°	361.7	15.9
60°-70°	296.7	13.1
70°-80°	199.9	8.8
80°-90°	65.1	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°	587.1	25.9
0°-40°	958.4	42.2
0°-60°	1708.3	75.3
0°-90°	2270.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2270.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	762	762	762	762	762	
5°	754	756	759	760	762	72
15°	718	722	729	736	737	203
25°	654	658	675	684	689	301
35°	565	573	593	614	622	353
45°	470	474	501	531	544	359
55°	361	367	402	440	457	320
65°	243	254	298	341	362	242
75°	130	144	192	236	253	137
85°	30	44	64	75	74	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	761.6	761.6	761.6	761.6	761.6
2.5°	757.3	759.4	762.7	763.8	763.8
5°	754.0	756.2	759.4	760.5	761.6
7.5°	748.6	750.7	755.1	757.3	758.3
10°	741.0	743.1	748.6	751.8	752.9
12.5°	731.2	733.4	739.9	744.2	745.3
15°	718.1	722.5	729.0	735.5	736.6
17.5°	709.5	708.4	717.1	724.7	726.8
20°	688.8	694.2	704.0	712.7	714.9
22.5°	671.4	675.8	688.8	698.6	702.9
25°	654.0	658.4	674.7	684.5	688.8
27.5°	632.3	638.8	654.0	668.2	673.6
30°	610.6	617.1	634.5	650.8	657.3
32.5°	588.9	596.5	614.9	632.3	639.9
35°	565.0	572.6	593.2	613.8	622.5
37.5°	540.0	549.7	571.5	594.3	604.1
40°	515.0	524.8	547.6	573.6	584.5
42.5°	494.3	498.7	524.8	553.0	563.9
45°	470.4	473.7	500.9	531.3	544.3
47.5°	435.7	447.6	477.0	510.6	523.7
50°	408.5	421.5	452.0	487.8	501.9
52.5°	385.7	394.4	428.1	463.9	480.2
55°	360.7	367.2	402.0	440.0	457.4
57.5°	330.3	342.2	377.0	416.1	433.5
60°	296.6	311.8	349.8	392.2	409.6
62.5°	274.9	283.6	324.8	367.2	386.8
65°	243.4	254.2	297.7	341.1	361.8
67.5°	217.3	228.2	272.7	316.2	336.8
70°	189.0	199.9	246.6	290.1	310.7
72.5°	156.4	171.7	220.6	264.0	285.7
75°	130.4	144.5	192.3	235.8	253.1
77.5°	101.0	119.5	164.1	199.9	212.9
80°	75.0	93.4	133.6	159.7	171.7
82.5°	51.1	69.5	100.0	119.5	126.0
85°	30.4	43.5	64.1	75.0	73.9
87.5°	14.1	18.5	26.1	26.1	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)