

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: P312642

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-RDP-CA08-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: P312642  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
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-RDP-CA08-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (168) 4000K 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**

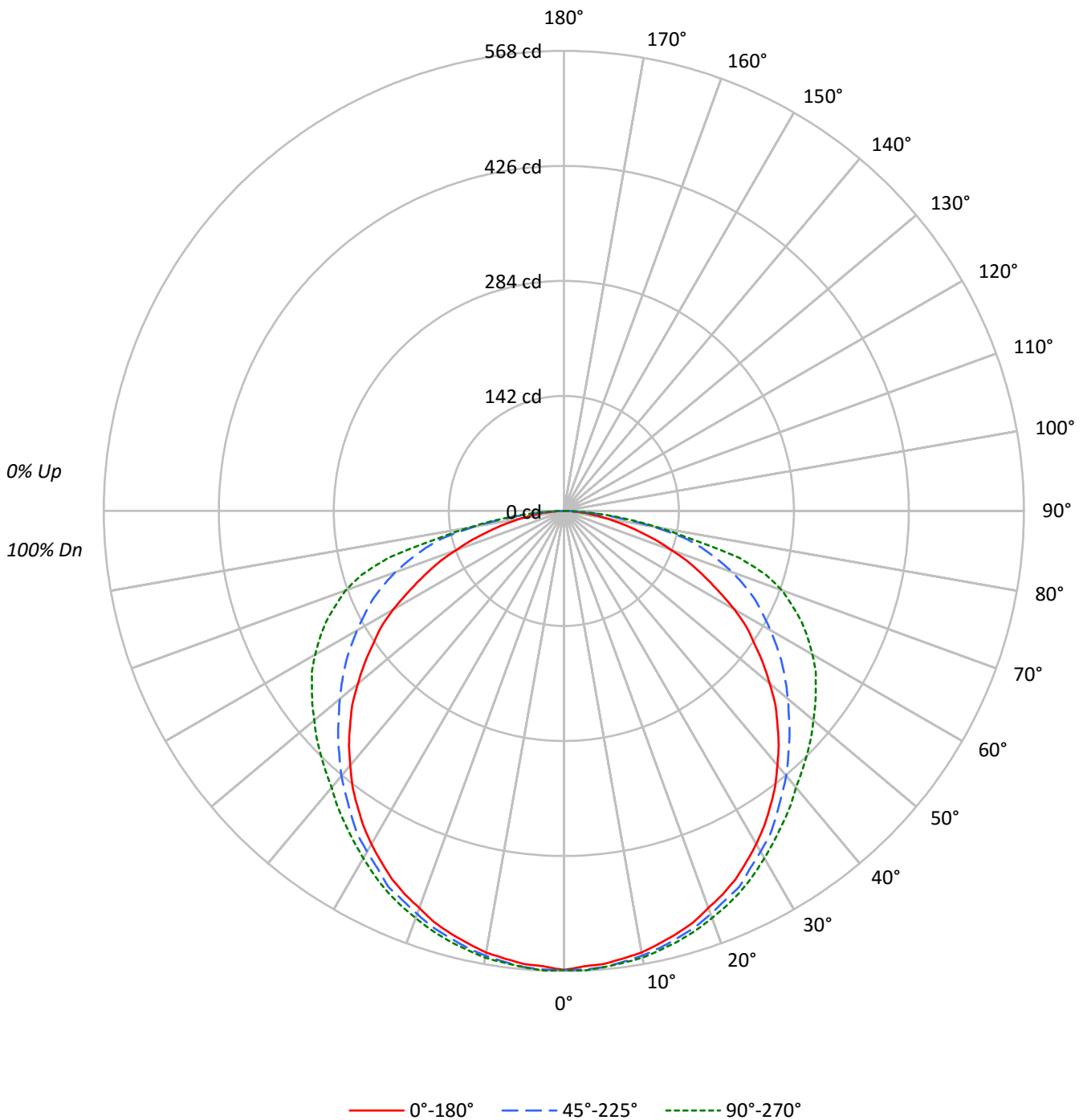
Lumens per Lamp: N/A  
Luminaire Lumens: 1804.0 lumens  
Efficiency: N/A  
Efficacy: 78.8 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	1525	1525	1525
5°	1516	1527	1527
10°	1512	1523	1530
15°	1505	1519	1531
20°	1493	1516	1531
25°	1489	1521	1537
30°	1476	1509	1538
35°	1461	1504	1548
40°	1441	1501	1566
45°	1419	1500	1616
50°	1389	1511	1683
55°	1351	1544	1780
60°	1307	1586	1907
65°	1217	1664	2062
70°	1117	1744	2256
75°	979	1835	2332
80°	843	1748	1830
85°	738	1269	1392



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.6	3.0
10°-20°	153.9	8.5
20°-30°	234.8	13.0
30°-40°	286.7	15.9
40°-50°	306.6	17.0
50°-60°	295.9	16.4
60°-70°	254.7	14.1
70°-80°	172.3	9.6
80°-90°	45.5	2.5
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°	442.3	24.5
0°-40°	729.0	40.4
0°-60°	1331.5	73.8
0°-90°	1804.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1804.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	561	563	565	565	565	53
15°	540	542	545	548	549	152
25°	502	504	512	515	518	231
35°	445	449	458	467	471	278
45°	373	380	394	414	425	288
55°	288	297	329	362	380	258
65°	191	210	261	303	324	190
75°	94	125	176	212	224	101
85°	24	33	41	42	45	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	566.7	566.7	566.7	566.7	566.7
2.5°	562.7	564.0	566.7	566.7	568.0
5°	561.4	562.7	565.3	565.3	565.3
7.5°	557.4	558.7	561.4	562.7	562.7
10°	553.4	554.7	557.4	558.7	560.0
12.5°	546.8	548.1	552.1	554.7	554.7
15°	540.1	541.5	545.4	548.1	549.4
17.5°	532.2	534.8	538.8	541.5	542.8
20°	521.5	524.2	529.5	533.5	534.8
22.5°	512.3	514.9	520.2	524.2	526.9
25°	501.6	504.3	512.3	514.9	517.6
27.5°	488.4	491.0	497.7	503.0	506.9
30°	475.1	477.8	485.7	492.4	495.0
32.5°	460.5	464.5	473.8	479.1	483.1
35°	444.6	448.6	457.8	467.1	471.1
37.5°	428.7	432.6	441.9	453.9	459.2
40°	410.1	415.4	427.3	443.2	445.9
42.5°	392.8	399.5	410.1	428.7	435.3
45°	372.9	379.5	394.1	414.1	424.7
47.5°	354.3	361.0	376.9	400.8	414.1
50°	331.8	341.1	361.0	388.8	402.1
52.5°	310.5	318.5	345.0	375.6	391.5
55°	288.0	297.3	329.1	362.3	379.5
57.5°	268.1	276.0	311.9	349.0	368.9
60°	242.9	253.5	294.6	334.4	354.3
62.5°	216.3	232.2	277.4	318.5	339.7
65°	191.1	209.7	261.4	302.6	323.8
67.5°	168.5	188.4	241.5	285.3	305.2
70°	142.0	167.2	221.6	264.1	286.7
72.5°	118.1	146.0	199.1	241.5	261.4
75°	94.2	124.7	176.5	212.3	224.3
77.5°	73.0	102.2	151.3	161.9	163.2
80°	54.4	81.0	112.8	114.1	118.1
82.5°	37.2	57.1	73.0	79.6	81.0
85°	23.9	33.2	41.1	42.5	45.1
87.5°	10.6	11.9	14.6	13.3	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)