

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: P312641

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-RDP-CA08-W2A-U-3500K**

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: P312641  
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-3500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (168) 3500K 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**

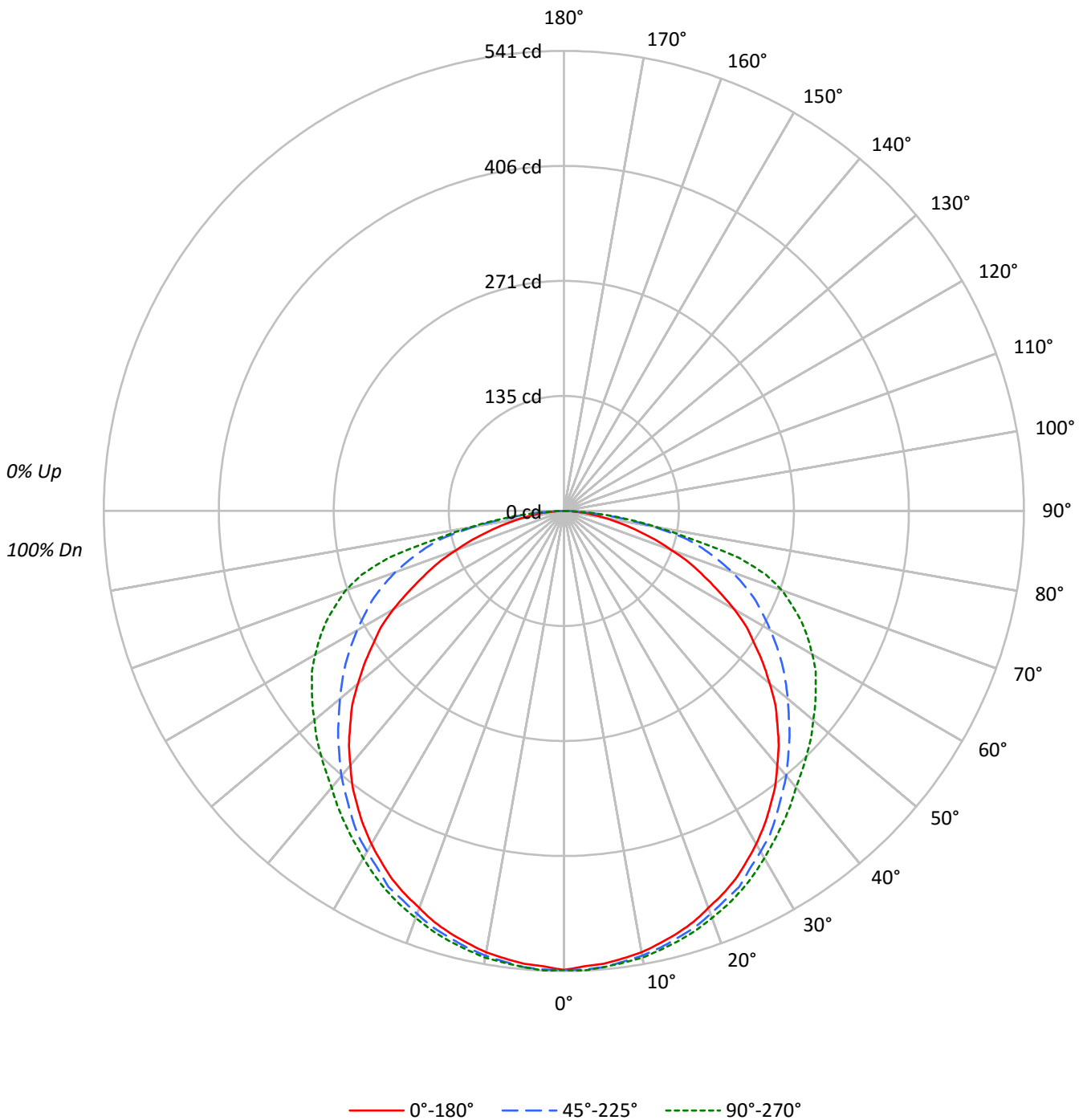
Lumens per Lamp: N/A  
Luminaire Lumens: 1718.0 lumens  
Efficiency: N/A  
Efficacy: 76.7 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1452	1452	1452
5°	1444	1454	1454
10°	1440	1450	1457
15°	1433	1447	1458
20°	1422	1444	1458
25°	1418	1448	1464
30°	1406	1437	1465
35°	1391	1432	1474
40°	1372	1430	1492
45°	1351	1429	1539
50°	1323	1439	1603
55°	1287	1470	1696
60°	1245	1510	1816
65°	1159	1585	1964
70°	1064	1661	2148
75°	933	1748	2221
80°	803	1664	1743
85°	701	1210	1328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.0	3.0
10°-20°	146.6	8.5
20°-30°	223.6	13.0
30°-40°	273.0	15.9
40°-50°	291.9	17.0
50°-60°	281.8	16.4
60°-70°	242.6	14.1
70°-80°	164.1	9.6
80°-90°	43.3	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°	421.2	24.5
0°-40°	694.3	40.4
0°-60°	1268.0	73.8
0°-90°	1718.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1718.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	540	540	540	540	540	
5°	535	536	538	538	538	51
15°	514	516	519	522	523	145
25°	478	480	488	490	493	220
35°	423	427	436	445	449	265
45°	355	362	375	394	404	274
55°	274	283	313	345	362	246
65°	182	200	249	288	308	181
75°	90	119	168	202	214	96
85°	23	32	39	40	43	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	539.7	539.7	539.7	539.7	539.7
2.5°	535.9	537.1	539.7	539.7	540.9
5°	534.6	535.9	538.4	538.4	538.4
7.5°	530.8	532.1	534.6	535.9	535.9
10°	527.0	528.3	530.8	532.1	533.3
12.5°	520.7	522.0	525.8	528.3	528.3
15°	514.4	515.6	519.4	522.0	523.2
17.5°	506.8	509.3	513.1	515.6	516.9
20°	496.7	499.2	504.3	508.1	509.3
22.5°	487.8	490.4	495.4	499.2	501.7
25°	477.7	480.3	487.8	490.4	492.9
27.5°	465.1	467.6	473.9	479.0	482.8
30°	452.4	455.0	462.6	468.9	471.4
32.5°	438.5	442.3	451.2	456.2	460.0
35°	423.4	427.2	436.0	444.9	448.7
37.5°	408.2	412.0	420.9	432.2	437.3
40°	390.5	395.6	407.0	422.1	424.6
42.5°	374.1	380.4	390.5	408.2	414.5
45°	355.1	361.5	375.4	394.3	404.4
47.5°	337.4	343.8	358.9	381.7	394.3
50°	316.0	324.8	343.8	370.3	382.9
52.5°	295.7	303.3	328.6	357.7	372.8
55°	274.3	283.1	313.4	345.0	361.5
57.5°	255.3	262.9	297.0	332.4	351.3
60°	231.3	241.4	280.6	318.5	337.4
62.5°	206.0	221.2	264.1	303.3	323.5
65°	182.0	199.7	249.0	288.2	308.4
67.5°	160.5	179.5	230.0	271.7	290.7
70°	135.2	159.2	211.1	251.5	273.0
72.5°	112.5	139.0	189.6	230.0	249.0
75°	89.7	118.8	168.1	202.2	213.6
77.5°	69.5	97.3	144.1	154.2	155.5
80°	51.8	77.1	107.4	108.7	112.5
82.5°	35.4	54.3	69.5	75.8	77.1
85°	22.7	31.6	39.2	40.4	43.0
87.5°	10.1	11.4	13.9	12.6	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)