

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: P312798

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-CA125-W2A-U-4500K**

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: P312798  
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-CA125-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 4500K 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**

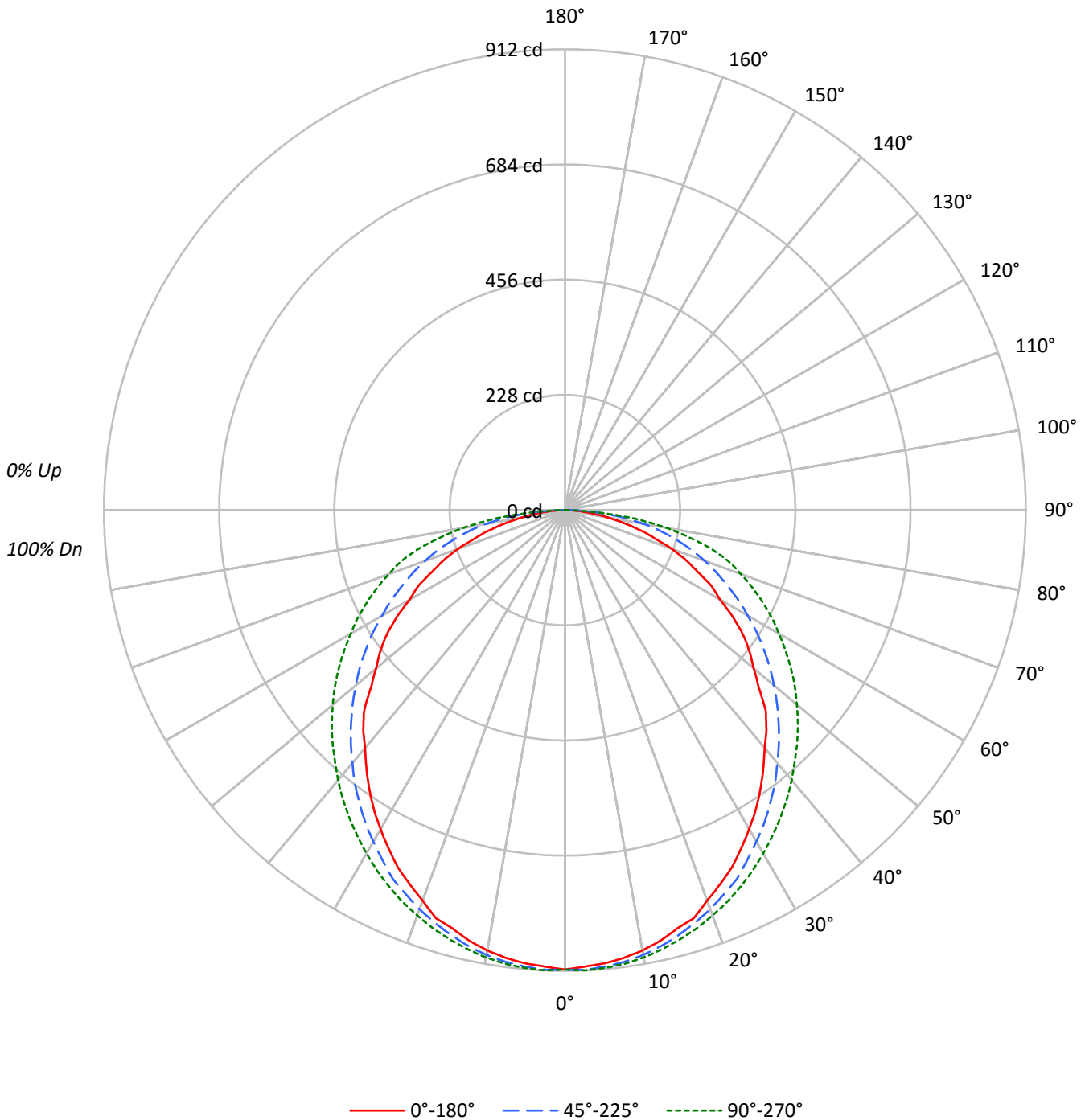
Lumens per Lamp: N/A  
Luminaire Lumens: 2711.0 lumens  
Efficiency: N/A  
Efficacy: 115.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2448	2448	2448
5°	2432	2450	2457
10°	2418	2443	2457
15°	2389	2425	2451
20°	2356	2408	2445
25°	2319	2393	2442
30°	2266	2355	2439
35°	2216	2327	2442
40°	2160	2297	2452
45°	2138	2277	2474
50°	2043	2260	2510
55°	2021	2252	2563
60°	1906	2249	2633
65°	1850	2264	2751
70°	1777	2317	2920
75°	1619	2388	3143
80°	1387	2473	3177
85°	1121	2365	2723



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.1	3.2
10°-20°	245.5	9.1
20°-30°	369.5	13.6
30°-40°	443.5	16.4
40°-50°	463.6	17.1
50°-60°	432.0	15.9
60°-70°	354.3	13.1
70°-80°	238.7	8.8
80°-90°	77.8	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°	701.1	25.9
0°-40°	1144.6	42.2
0°-60°	2040.2	75.3
0°-90°	2711.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2711.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	910	910	910	910	910	
5°	900	903	907	908	910	85
15°	858	863	871	878	880	242
25°	781	786	806	817	823	359
35°	675	684	708	733	744	422
45°	562	566	598	634	650	429
55°	431	439	480	526	546	382
65°	291	304	356	407	432	289
75°	156	173	230	282	302	164
85°	36	52	77	90	88	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	909.6	909.6	909.6	909.6	909.6
2.5°	904.4	907.0	910.9	912.2	912.2
5°	900.5	903.1	907.0	908.3	909.6
7.5°	894.0	896.6	901.8	904.4	905.7
10°	884.9	887.5	894.0	897.9	899.2
12.5°	873.2	875.8	883.6	888.8	890.1
15°	857.7	862.9	870.6	878.4	879.7
17.5°	847.3	846.0	856.4	865.4	868.0
20°	822.6	829.1	840.8	851.2	853.8
22.5°	801.9	807.1	822.6	834.3	839.5
25°	781.1	786.3	805.8	817.4	822.6
27.5°	755.2	762.9	781.1	798.0	804.5
30°	729.2	737.0	757.8	777.2	785.0
32.5°	703.3	712.3	734.4	755.2	764.2
35°	674.7	683.8	708.4	733.1	743.5
37.5°	644.9	656.5	682.5	709.7	721.4
40°	615.0	626.7	654.0	685.1	698.1
42.5°	590.4	595.6	626.7	660.4	673.4
45°	561.8	565.7	598.2	634.5	650.1
47.5°	520.3	534.6	569.6	609.8	625.4
50°	487.9	503.4	539.8	582.6	599.5
52.5°	460.6	471.0	511.2	554.0	573.5
55°	430.8	438.6	480.1	525.5	546.3
57.5°	394.4	408.7	450.2	497.0	517.7
60°	354.2	372.4	417.8	468.4	489.2
62.5°	328.3	338.7	388.0	438.6	461.9
65°	290.6	303.6	355.5	407.4	432.1
67.5°	259.5	272.5	325.7	377.6	402.2
70°	225.8	238.7	294.5	346.4	371.1
72.5°	186.8	205.0	263.4	315.3	341.2
75°	155.7	172.6	229.7	281.6	302.3
77.5°	120.7	142.7	195.9	238.7	254.3
80°	89.5	111.6	159.6	190.7	205.0
82.5°	61.0	83.0	119.4	142.7	150.5
85°	36.3	51.9	76.6	89.5	88.2
87.5°	16.9	22.1	31.1	31.1	29.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)