

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: P312903

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-S-CP125-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: P312903  
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: 22FCZ2-20HE-UNV-L83050-S-CP125-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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**

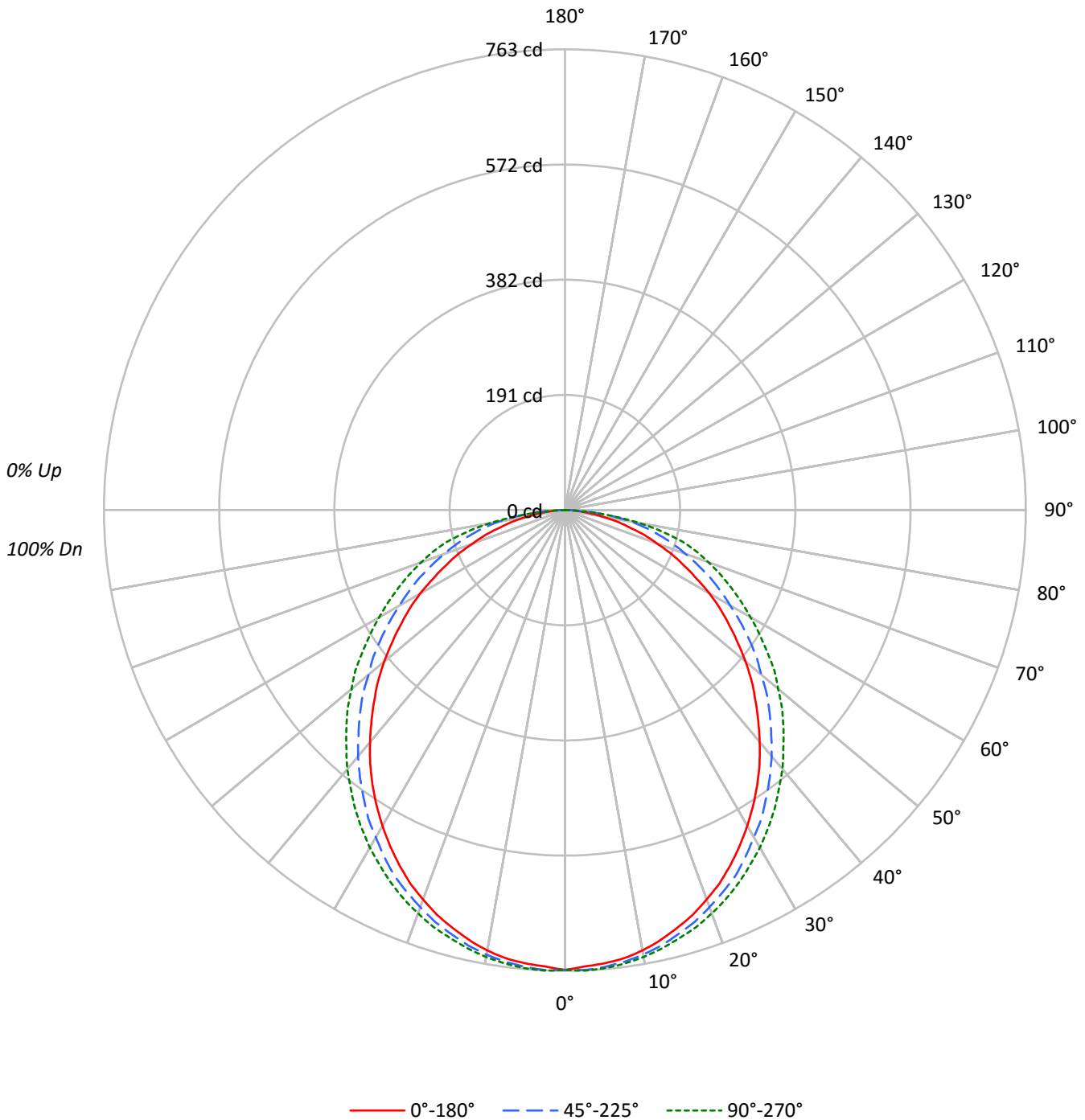
Lumens per Lamp: N/A  
Luminaire Lumens: 2125.0 lumens  
Efficiency: N/A  
Efficacy: 121.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	2049	2049	2049
5°	2035	2052	2057
10°	2024	2043	2053
15°	1997	2025	2044
20°	1965	2005	2036
25°	1925	1984	2022
30°	1876	1944	2006
35°	1824	1909	1987
40°	1762	1870	1968
45°	1698	1826	1947
50°	1635	1777	1930
55°	1558	1744	1917
60°	1489	1702	1910
65°	1389	1692	1932
70°	1279	1677	1989
75°	1154	1701	2093
80°	998	1751	1967
85°	827	1470	1470



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.0	3.4
10°-20°	204.9	9.6
20°-30°	306.6	14.4
30°-40°	363.1	17.1
40°-50°	370.1	17.4
50°-60°	331.7	15.6
60°-70°	259.7	12.2
70°-80°	167.4	7.9
80°-90°	49.5	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°	583.6	27.5
0°-40°	946.7	44.5
0°-60°	1648.4	77.6
0°-90°	2125.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2125.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	762	762	762	762	762	
5°	754	756	760	760	762	72
15°	717	721	727	733	734	202
25°	648	654	668	677	681	298
35°	555	562	581	599	605	347
45°	446	456	480	505	512	345
55°	332	343	372	398	408	298
65°	218	231	266	292	303	217
75°	111	128	164	191	201	119
85°	27	37	48	48	48	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	761.5	761.5	761.5	761.5	761.5
2.5°	756.5	758.5	762.4	763.4	763.4
5°	753.5	755.5	759.5	760.5	761.5
7.5°	748.6	749.6	754.5	756.5	757.5
10°	740.6	742.6	747.6	750.5	751.5
12.5°	729.7	732.7	738.6	742.6	743.6
15°	716.8	720.8	726.8	732.7	733.7
17.5°	703.0	706.9	714.9	721.8	723.8
20°	686.1	691.1	700.0	707.9	710.9
22.5°	669.2	673.2	684.1	694.0	697.0
25°	648.4	654.4	668.3	677.2	681.1
27.5°	626.6	633.6	647.4	659.3	663.3
30°	603.8	610.7	625.6	640.5	645.5
32.5°	580.0	587.9	605.8	620.7	625.6
35°	555.2	562.2	581.0	598.9	604.8
37.5°	529.4	535.4	557.2	576.0	582.0
40°	501.7	509.6	532.4	554.2	560.2
42.5°	473.9	482.8	505.7	529.4	535.4
45°	446.2	456.1	479.9	504.7	511.6
47.5°	419.4	427.3	454.1	477.9	487.8
50°	390.6	398.6	424.4	451.1	461.0
52.5°	360.9	371.8	399.6	425.3	437.2
55°	332.1	343.1	371.8	397.6	408.5
57.5°	305.4	314.3	344.0	370.8	381.7
60°	276.6	284.6	316.3	345.0	354.9
62.5°	245.9	257.8	290.5	317.3	329.2
65°	218.1	231.0	265.7	291.5	303.4
67.5°	192.3	204.2	238.0	265.7	278.6
70°	162.6	178.5	213.2	240.9	252.8
72.5°	138.8	152.7	188.4	216.1	229.0
75°	111.0	127.9	163.6	191.4	201.3
77.5°	88.2	105.1	138.8	160.6	165.6
80°	64.4	81.3	113.0	123.9	126.9
82.5°	43.6	59.5	81.3	84.3	85.3
85°	26.8	36.7	47.6	47.6	47.6
87.5°	12.9	14.9	16.9	15.9	15.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)