

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: P312898

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-S-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: P312898  
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-CA125-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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**

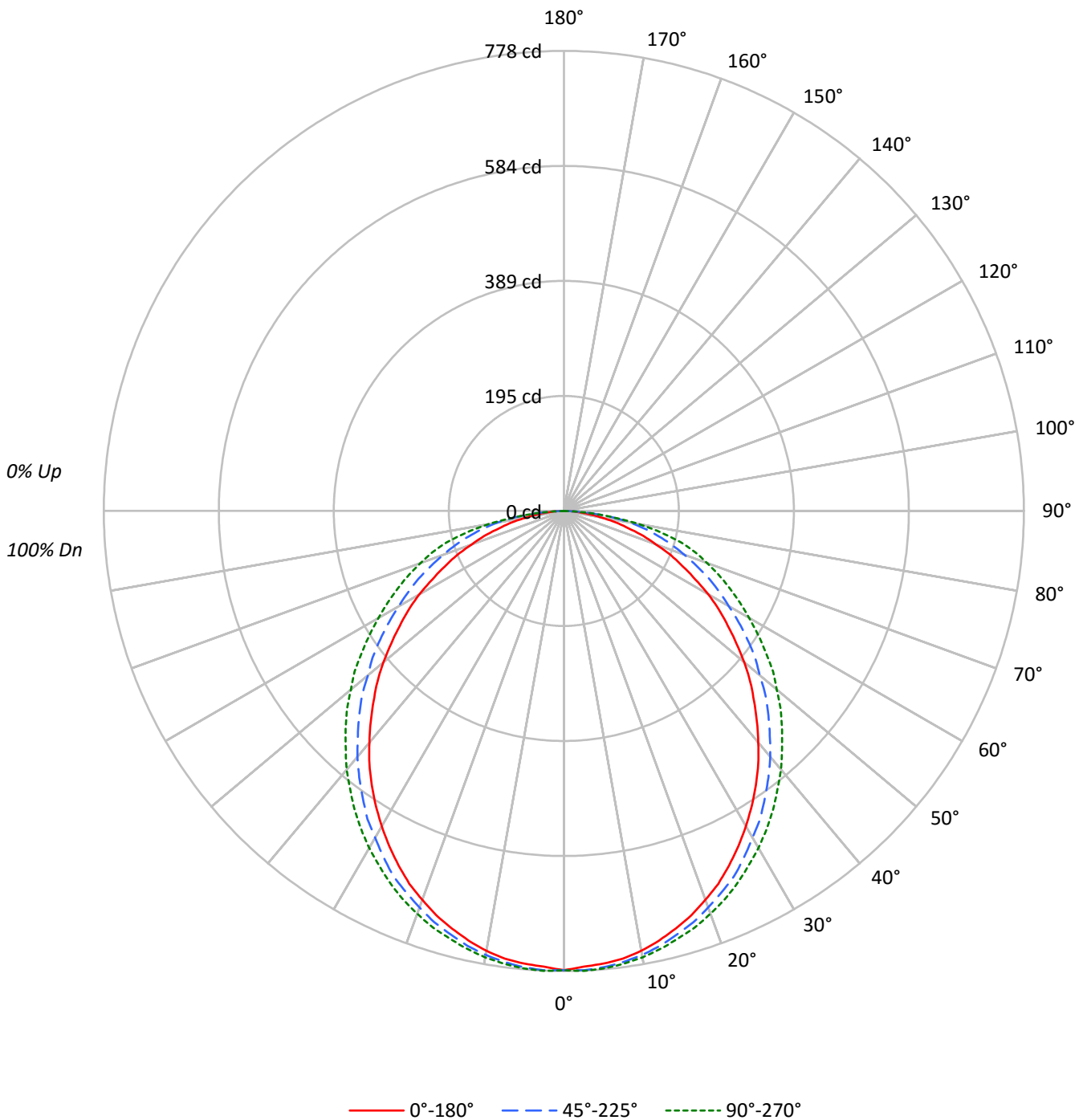
Lumens per Lamp: N/A  
Luminaire Lumens: 2167.0 lumens  
Efficiency: N/A  
Efficacy: 123.8 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2090	2090	2090
5°	2076	2092	2098
10°	2064	2083	2094
15°	2036	2065	2084
20°	2004	2044	2076
25°	1963	2023	2062
30°	1913	1982	2045
35°	1860	1946	2026
40°	1797	1907	2007
45°	1732	1862	1985
50°	1668	1811	1968
55°	1589	1779	1955
60°	1518	1736	1948
65°	1416	1726	1970
70°	1304	1710	2028
75°	1177	1734	2133
80°	1018	1787	2005
85°	843	1497	1497



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.4	3.4
10°-20°	209.0	9.6
20°-30°	312.7	14.4
30°-40°	370.3	17.1
40°-50°	377.4	17.4
50°-60°	338.2	15.6
60°-70°	264.8	12.2
70°-80°	170.8	7.9
80°-90°	50.4	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°	595.1	27.5
0°-40°	965.4	44.5
0°-60°	1681.0	77.6
0°-90°	2167.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2167.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	776	776	776	776	776	
5°	768	770	774	776	776	73
15°	731	735	741	747	748	206
25°	661	667	682	691	695	304
35°	566	573	592	611	617	354
45°	455	465	489	515	522	351
55°	339	350	379	405	417	304
65°	222	236	271	297	309	221
75°	113	130	167	195	205	121
85°	27	37	48	48	48	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	776.5	776.5	776.5	776.5	776.5
2.5°	771.4	773.5	777.5	778.5	778.5
5°	768.4	770.4	774.5	775.5	776.5
7.5°	763.4	764.4	769.4	771.4	772.5
10°	755.3	757.3	762.3	765.4	766.4
12.5°	744.1	747.2	753.2	757.3	758.3
15°	731.0	735.0	741.1	747.2	748.2
17.5°	716.9	720.9	729.0	736.1	738.1
20°	699.7	704.7	713.8	721.9	724.9
22.5°	682.5	686.5	697.6	707.8	710.8
25°	661.2	667.3	681.5	690.6	694.6
27.5°	639.0	646.1	660.2	672.4	676.4
30°	615.7	622.8	638.0	653.2	658.2
32.5°	591.5	599.6	617.8	632.9	638.0
35°	566.2	573.3	592.5	610.7	616.8
37.5°	539.9	546.0	568.2	587.4	593.5
40°	511.6	519.7	542.9	565.2	571.3
42.5°	483.3	492.4	515.6	539.9	546.0
45°	455.0	465.1	489.4	514.6	521.7
47.5°	427.7	435.8	463.1	487.3	497.4
50°	398.4	406.5	432.7	460.0	470.1
52.5°	368.0	379.2	407.5	433.8	445.9
55°	338.7	349.8	379.2	405.4	416.6
57.5°	311.4	320.5	350.8	378.1	389.3
60°	282.1	290.2	322.5	351.9	362.0
62.5°	250.7	262.9	296.2	323.5	335.7
65°	222.4	235.6	271.0	297.3	309.4
67.5°	196.1	208.3	242.7	271.0	284.1
70°	165.8	182.0	217.4	245.7	257.8
72.5°	141.6	155.7	192.1	220.4	233.6
75°	113.2	130.4	166.8	195.1	205.2
77.5°	90.0	107.2	141.6	163.8	168.8
80°	65.7	82.9	115.3	126.4	129.4
82.5°	44.5	60.7	82.9	85.9	87.0
85°	27.3	37.4	48.5	48.5	48.5
87.5°	13.1	15.2	17.2	16.2	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)