

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: P312778

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-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: P312778  
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: 22FCZ2-24HE-UNV-L83050-CP125-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, RIBBED 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**

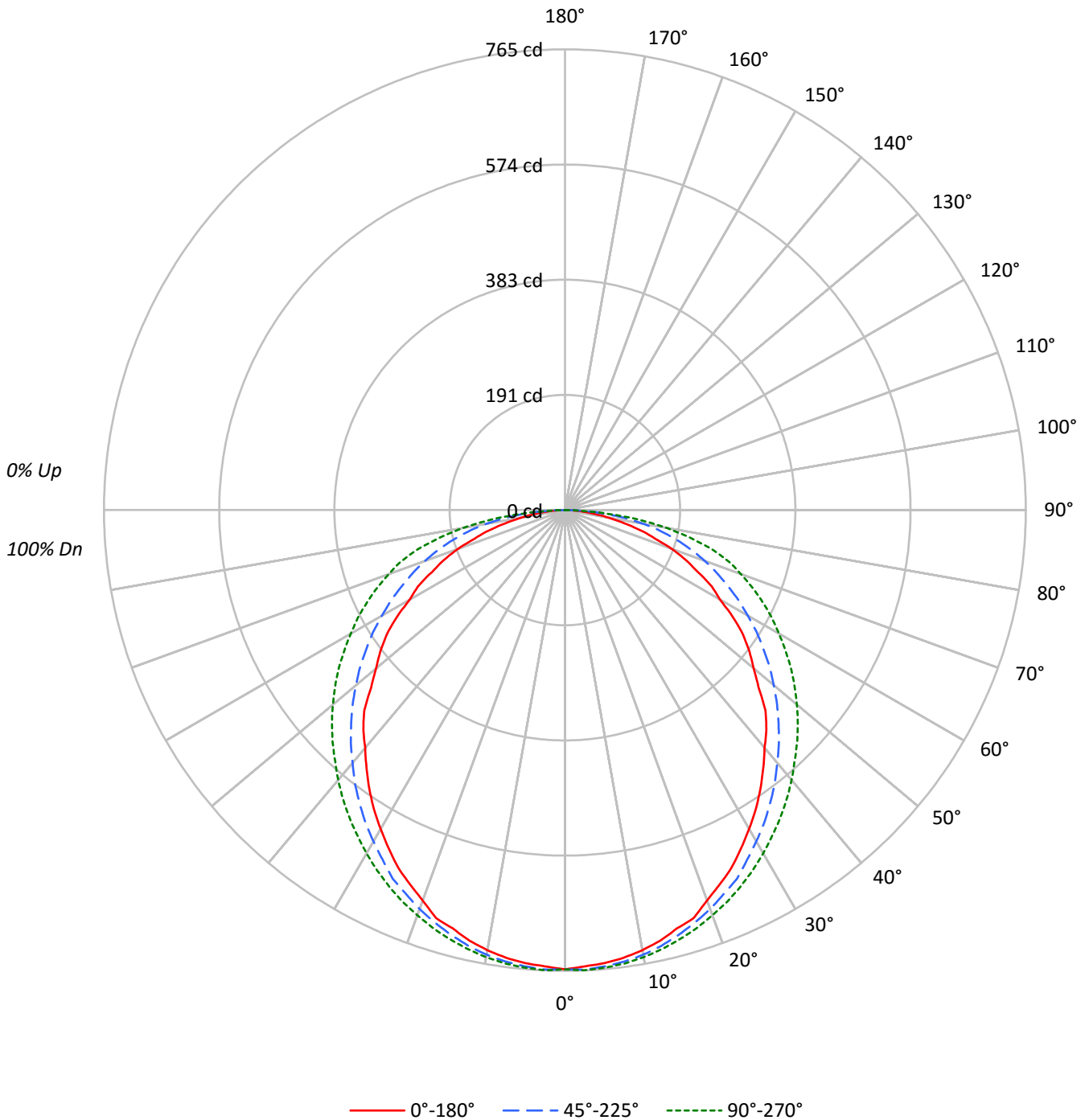
Lumens per Lamp: N/A  
Luminaire Lumens: 2273.0 lumens  
Efficiency: N/A  
Efficacy: 114.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2052	2052	2052
5°	2039	2054	2060
10°	2027	2048	2060
15°	2003	2034	2055
20°	1975	2019	2050
25°	1945	2006	2048
30°	1900	1974	2045
35°	1858	1951	2048
40°	1812	1926	2056
45°	1793	1909	2074
50°	1712	1895	2104
55°	1695	1888	2149
60°	1598	1885	2207
65°	1552	1898	2307
70°	1489	1943	2448
75°	1357	2002	2636
80°	1164	2073	2664
85°	942	1982	2285



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.2	3.2
10°-20°	205.9	9.1
20°-30°	309.8	13.6
30°-40°	371.9	16.4
40°-50°	388.7	17.1
50°-60°	362.2	15.9
60°-70°	297.1	13.1
70°-80°	200.2	8.8
80°-90°	65.2	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°	587.8	25.9
0°-40°	959.7	42.2
0°-60°	1710.6	75.3
0°-90°	2273.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2273.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	763	763	763	763	763	
5°	755	757	760	762	763	72
15°	719	723	730	736	738	203
25°	655	659	676	685	690	301
35°	566	573	594	615	623	354
45°	471	474	502	532	545	360
55°	361	368	402	441	458	320
65°	244	255	298	342	362	242
75°	130	145	193	236	254	137
85°	30	44	64	75	74	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	762.6	762.6	762.6	762.6	762.6
2.5°	758.3	760.4	763.7	764.8	764.8
5°	755.0	757.2	760.4	761.5	762.6
7.5°	749.6	751.7	756.1	758.3	759.3
10°	741.9	744.1	749.6	752.8	753.9
12.5°	732.1	734.3	740.9	745.2	746.3
15°	719.1	723.4	730.0	736.5	737.6
17.5°	710.4	709.3	718.0	725.6	727.8
20°	689.7	695.2	705.0	713.7	715.8
22.5°	672.3	676.7	689.7	699.5	703.9
25°	654.9	659.3	675.6	685.4	689.7
27.5°	633.2	639.7	654.9	669.1	674.5
30°	611.4	617.9	635.3	651.6	658.2
32.5°	589.6	597.3	615.7	633.2	640.8
35°	565.7	573.3	594.0	614.7	623.4
37.5°	540.7	550.5	572.2	595.1	604.9
40°	515.7	525.5	548.3	574.4	585.3
42.5°	495.0	499.3	525.5	553.7	564.6
45°	471.1	474.3	501.5	532.0	545.0
47.5°	436.2	448.2	477.6	511.3	524.4
50°	409.0	422.1	452.6	488.5	502.6
52.5°	386.2	394.9	428.6	464.5	480.8
55°	361.2	367.7	402.5	440.6	458.0
57.5°	330.7	342.7	377.5	416.7	434.1
60°	297.0	312.2	350.3	392.7	410.1
62.5°	275.2	283.9	325.3	367.7	387.3
65°	243.7	254.6	298.1	341.6	362.3
67.5°	217.6	228.5	273.1	316.6	337.2
70°	189.3	200.2	247.0	290.5	311.1
72.5°	156.7	171.9	220.8	264.4	286.1
75°	130.5	144.7	192.6	236.1	253.5
77.5°	101.2	119.7	164.3	200.2	213.2
80°	75.1	93.6	133.8	159.9	171.9
82.5°	51.1	69.6	100.1	119.7	126.2
85°	30.5	43.5	64.2	75.1	74.0
87.5°	14.1	18.5	26.1	26.1	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)