

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: P308874

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CA08-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: P308874  
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-L82765-S-CA08-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 3000K 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**

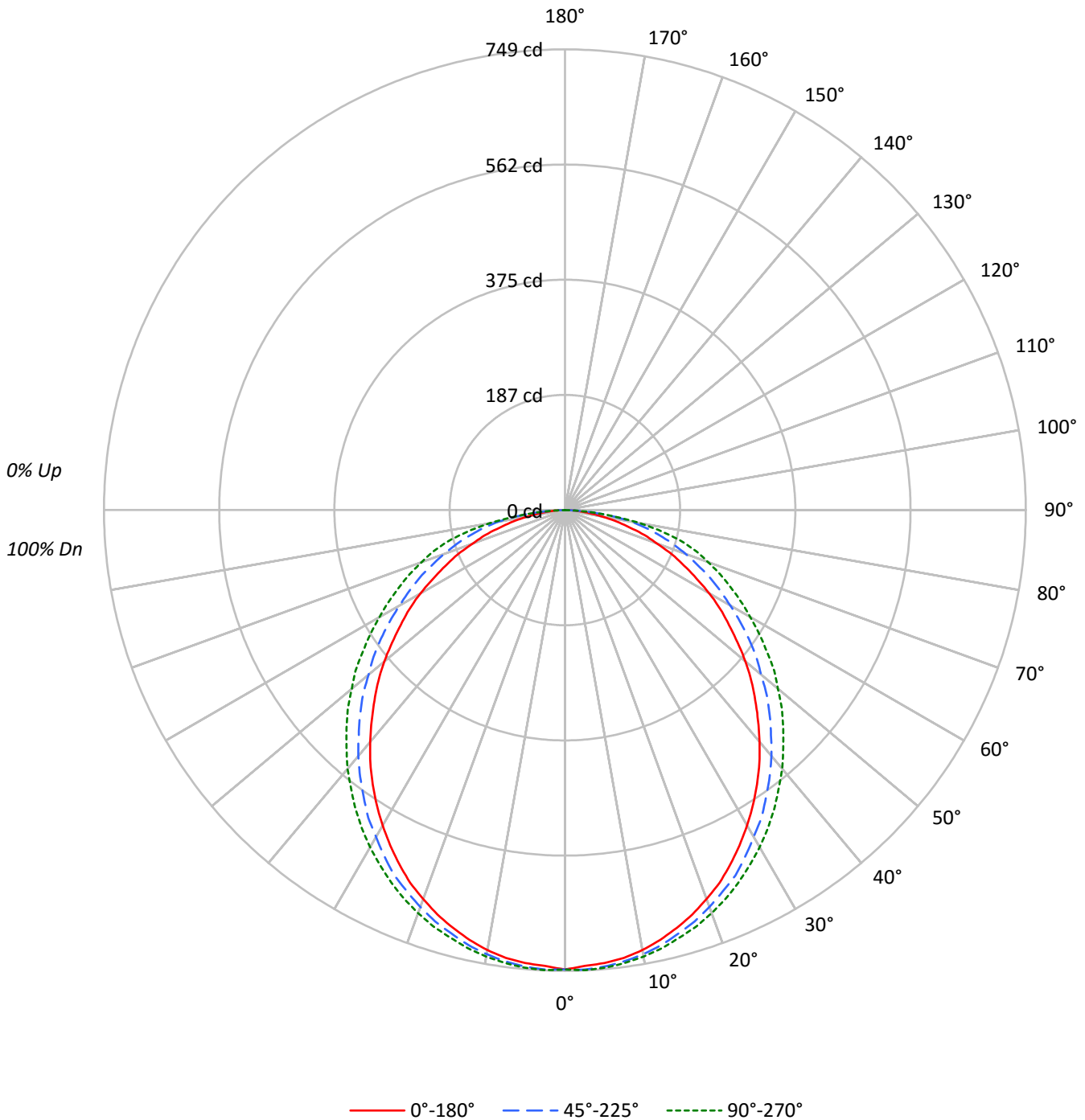
Lumens per Lamp: N/A  
Luminaire Lumens: 2084.0 lumens  
Efficiency: N/A  
Efficacy: 122.6 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17  
Input Voltage (V): NR  
Input Current (A<sub>in</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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CATALOG NUMBER: 22FC22-20HE-UNV-L82765-S-CA08-W2A-U-4500K

**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°	2010	2010	2010
5°	1996	2012	2017
10°	1985	2003	2014
15°	1958	1986	2004
20°	1927	1966	1997
25°	1888	1946	1983
30°	1840	1907	1967
35°	1789	1872	1948
40°	1728	1834	1930
45°	1665	1791	1909
50°	1604	1742	1893
55°	1528	1711	1879
60°	1460	1669	1873
65°	1362	1659	1894
70°	1255	1645	1950
75°	1132	1668	2052
80°	979	1717	1929
85°	812	1442	1442



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.6	3.4
10°-20°	201.0	9.6
20°-30°	300.7	14.4
30°-40°	356.1	17.1
40°-50°	362.9	17.4
50°-60°	325.3	15.6
60°-70°	254.7	12.2
70°-80°	164.2	7.9
80°-90°	48.5	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°	572.3	27.5
0°-40°	928.4	44.5
0°-60°	1616.6	77.6
0°-90°	2084.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2084.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	747	747	747	747	747	
5°	739	741	745	746	747	70
15°	703	707	713	719	720	198
25°	636	642	655	664	668	293
35°	544	551	570	587	593	340
45°	438	447	471	495	502	338
55°	326	336	365	390	401	292
65°	214	227	261	286	298	212
75°	109	125	160	188	197	117
85°	26	36	47	47	47	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	746.8	746.8	746.8	746.8	746.8
2.5°	741.9	743.8	747.7	748.7	748.7
5°	739.0	740.9	744.8	745.8	746.8
7.5°	734.1	735.1	740.0	741.9	742.9
10°	726.3	728.3	733.1	736.1	737.0
12.5°	715.6	718.6	724.4	728.3	729.3
15°	703.0	706.9	712.7	718.6	719.5
17.5°	689.4	693.3	701.1	707.9	709.8
20°	672.9	677.7	686.5	694.3	697.2
22.5°	656.3	660.2	670.9	680.6	683.6
25°	635.9	641.7	655.4	664.1	668.0
27.5°	614.5	621.3	634.9	646.6	650.5
30°	592.2	599.0	613.6	628.1	633.0
32.5°	568.8	576.6	594.1	608.7	613.6
35°	544.5	551.3	569.8	587.3	593.1
37.5°	519.2	525.1	546.5	564.9	570.8
40°	492.0	499.8	522.2	543.5	549.4
42.5°	464.8	473.5	495.9	519.2	525.1
45°	437.6	447.3	470.6	494.9	501.7
47.5°	411.3	419.1	445.3	468.7	478.4
50°	383.1	390.9	416.2	442.4	452.1
52.5°	353.9	364.6	391.9	417.1	428.8
55°	325.7	336.4	364.6	389.9	400.6
57.5°	299.5	308.2	337.4	363.7	374.4
60°	271.3	279.1	310.2	338.4	348.1
62.5°	241.1	252.8	284.9	311.2	322.8
65°	213.9	226.6	260.6	285.9	297.5
67.5°	188.6	200.3	233.4	260.6	273.2
70°	159.5	175.0	209.1	236.3	247.9
72.5°	136.1	149.7	184.7	212.0	224.6
75°	108.9	125.4	160.4	187.7	197.4
77.5°	86.5	103.1	136.1	157.5	162.4
80°	63.2	79.7	110.8	121.5	124.5
82.5°	42.8	58.3	79.7	82.6	83.6
85°	26.3	36.0	46.7	46.7	46.7
87.5°	12.6	14.6	16.5	15.6	15.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)