

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: P308603

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CA08-W2A-U-4000K**

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: P308603  
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: 22FCZ2-20HE-UNV-L82765-CA08-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, RIBBED 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**

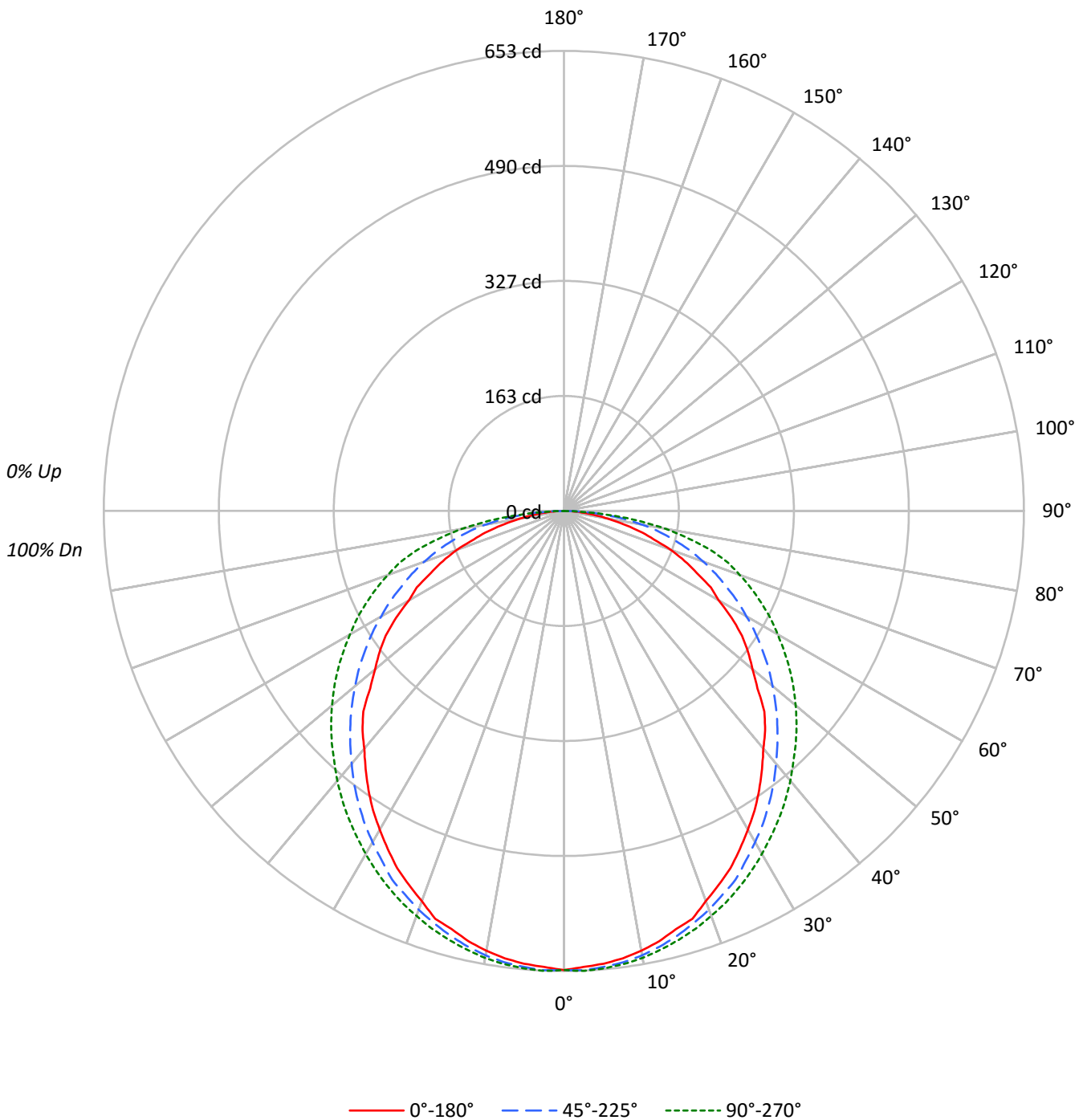
Lumens per Lamp: N/A  
Luminaire Lumens: 1942.0 lumens  
Efficiency: N/A  
Efficacy: 114.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1753	1753	1753
5°	1743	1755	1760
10°	1732	1750	1760
15°	1712	1738	1756
20°	1688	1725	1751
25°	1661	1714	1750
30°	1623	1687	1747
35°	1588	1667	1750
40°	1548	1646	1757
45°	1532	1631	1772
50°	1463	1619	1798
55°	1448	1613	1836
60°	1365	1611	1886
65°	1326	1622	1971
70°	1272	1660	2091
75°	1159	1710	2252
80°	993	1771	2276
85°	803	1692	1951



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.7	3.2
10°-20°	175.9	9.1
20°-30°	264.7	13.6
30°-40°	317.7	16.4
40°-50°	332.1	17.1
50°-60°	309.5	15.9
60°-70°	253.8	13.1
70°-80°	171.0	8.8
80°-90°	55.7	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°	502.2	25.9
0°-40°	819.9	42.2
0°-60°	1461.5	75.3
0°-90°	1942.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1942.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	652	652	652	652	652	
5°	645	647	650	651	652	61
15°	614	618	624	629	630	174
25°	560	563	577	586	589	257
35°	483	490	508	525	533	302
45°	402	405	428	454	466	307
55°	309	314	344	376	391	273
65°	208	218	255	292	310	207
75°	112	124	164	202	217	117
85°	26	37	55	64	63	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	651.6	651.6	651.6	651.6	651.6
2.5°	647.8	649.7	652.5	653.4	653.4
5°	645.1	646.9	649.7	650.6	651.6
7.5°	640.4	642.3	646.0	647.8	648.8
10°	633.9	635.8	640.4	643.2	644.1
12.5°	625.5	627.4	633.0	636.7	637.6
15°	614.4	618.1	623.7	629.3	630.2
17.5°	606.9	606.0	613.4	620.0	621.8
20°	589.3	593.9	602.3	609.7	611.6
22.5°	574.4	578.1	589.3	597.6	601.4
25°	559.5	563.3	577.2	585.6	589.3
27.5°	541.0	546.5	559.5	571.6	576.3
30°	522.4	527.9	542.8	556.8	562.3
32.5°	503.8	510.3	526.1	541.0	547.5
35°	483.3	489.8	507.5	525.1	532.6
37.5°	461.9	470.3	488.9	508.4	516.8
40°	440.6	448.9	468.5	490.8	500.1
42.5°	422.9	426.6	448.9	473.1	482.4
45°	402.5	405.2	428.5	454.5	465.7
47.5°	372.7	382.9	408.0	436.9	448.0
50°	349.5	360.6	386.7	417.3	429.4
52.5°	330.0	337.4	366.2	396.9	410.8
55°	308.6	314.2	343.9	376.4	391.3
57.5°	282.6	292.8	322.5	356.0	370.9
60°	253.7	266.8	299.3	335.5	350.4
62.5°	235.2	242.6	277.9	314.2	330.9
65°	208.2	217.5	254.7	291.9	309.5
67.5°	185.9	195.2	233.3	270.5	288.1
70°	161.7	171.0	211.0	248.2	265.8
72.5°	133.8	146.9	188.7	225.9	244.5
75°	111.5	123.6	164.5	201.7	216.6
77.5°	86.4	102.2	140.3	171.0	182.2
80°	64.1	79.9	114.3	136.6	146.9
82.5°	43.7	59.5	85.5	102.2	107.8
85°	26.0	37.2	54.8	64.1	63.2
87.5°	12.1	15.8	22.3	22.3	21.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)