

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: P308627

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CP187-W2A-U-2700K**

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: P308627  
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-CP187-W2A-U-2700K  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB 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**

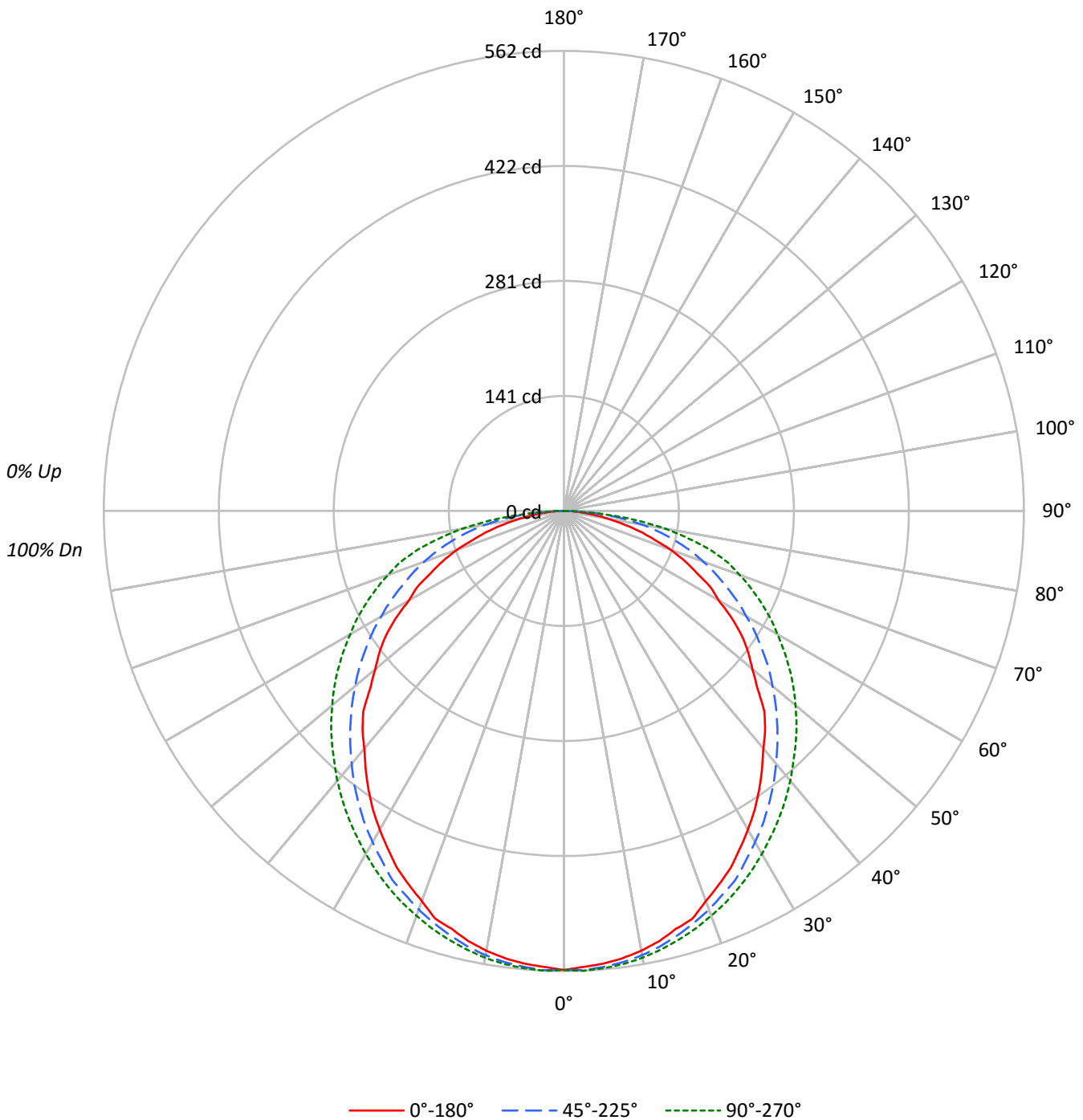
Lumens per Lamp: N/A  
Luminaire Lumens: 1671.0 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1509	1509	1509
5°	1499	1510	1514
10°	1490	1506	1514
15°	1473	1495	1511
20°	1452	1484	1507
25°	1430	1475	1506
30°	1397	1451	1504
35°	1366	1435	1506
40°	1332	1416	1512
45°	1318	1403	1525
50°	1259	1393	1547
55°	1246	1388	1580
60°	1175	1386	1623
65°	1140	1395	1696
70°	1095	1428	1799
75°	998	1472	1937
80°	855	1525	1959
85°	692	1457	1680



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.0	3.2
10°-20°	151.3	9.1
20°-30°	227.8	13.6
30°-40°	273.4	16.4
40°-50°	285.7	17.1
50°-60°	266.3	15.9
60°-70°	218.4	13.1
70°-80°	147.2	8.8
80°-90°	47.9	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°	432.2	25.9
0°-40°	705.5	42.2
0°-60°	1257.5	75.3
0°-90°	1671.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1671.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	561	561	561	561	561	
5°	555	557	559	560	561	53
15°	529	532	537	541	542	149
25°	482	485	497	504	507	221
35°	416	422	437	452	458	260
45°	346	349	369	391	401	265
55°	266	270	296	324	337	235
65°	179	187	219	251	266	178
75°	96	106	142	174	186	101
85°	22	32	47	55	54	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	560.6	560.6	560.6	560.6	560.6
2.5°	557.4	559.0	561.4	562.2	562.2
5°	555.0	556.6	559.0	559.8	560.6
7.5°	551.0	552.6	555.8	557.4	558.2
10°	545.4	547.0	551.0	553.4	554.2
12.5°	538.2	539.8	544.6	547.8	548.6
15°	528.6	531.8	536.6	541.4	542.2
17.5°	522.2	521.4	527.8	533.4	535.0
20°	507.1	511.0	518.2	524.6	526.2
22.5°	494.3	497.5	507.1	514.2	517.4
25°	481.5	484.7	496.7	503.9	507.1
27.5°	465.5	470.3	481.5	491.9	495.9
30°	449.5	454.3	467.1	479.1	483.9
32.5°	433.5	439.1	452.7	465.5	471.1
35°	415.9	421.5	436.7	451.9	458.3
37.5°	397.5	404.7	420.7	437.5	444.7
40°	379.1	386.3	403.1	422.3	430.3
42.5°	363.9	367.1	386.3	407.1	415.1
45°	346.3	348.7	368.7	391.1	400.7
47.5°	320.7	329.5	351.1	375.9	385.5
50°	300.7	310.3	332.7	359.1	369.5
52.5°	283.9	290.3	315.1	341.5	353.5
55°	265.5	270.3	295.9	323.9	336.7
57.5°	243.1	251.9	277.5	306.3	319.1
60°	218.3	229.5	257.5	288.7	301.5
62.5°	202.3	208.7	239.1	270.3	284.7
65°	179.1	187.1	219.1	251.1	266.3
67.5°	160.0	168.0	200.7	232.7	247.9
70°	139.2	147.2	181.5	213.5	228.7
72.5°	115.2	126.4	162.4	194.3	210.3
75°	96.0	106.4	141.6	173.5	186.3
77.5°	74.4	88.0	120.8	147.2	156.8
80°	55.2	68.8	98.4	117.6	126.4
82.5°	37.6	51.2	73.6	88.0	92.8
85°	22.4	32.0	47.2	55.2	54.4
87.5°	10.4	13.6	19.2	19.2	18.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)