

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: P312761

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-CP250-W2A-U-3500K**

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: P312761  
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-L83050-CP250-W2A-U-3500K  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET  
Light Source: (168) 3500K 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**

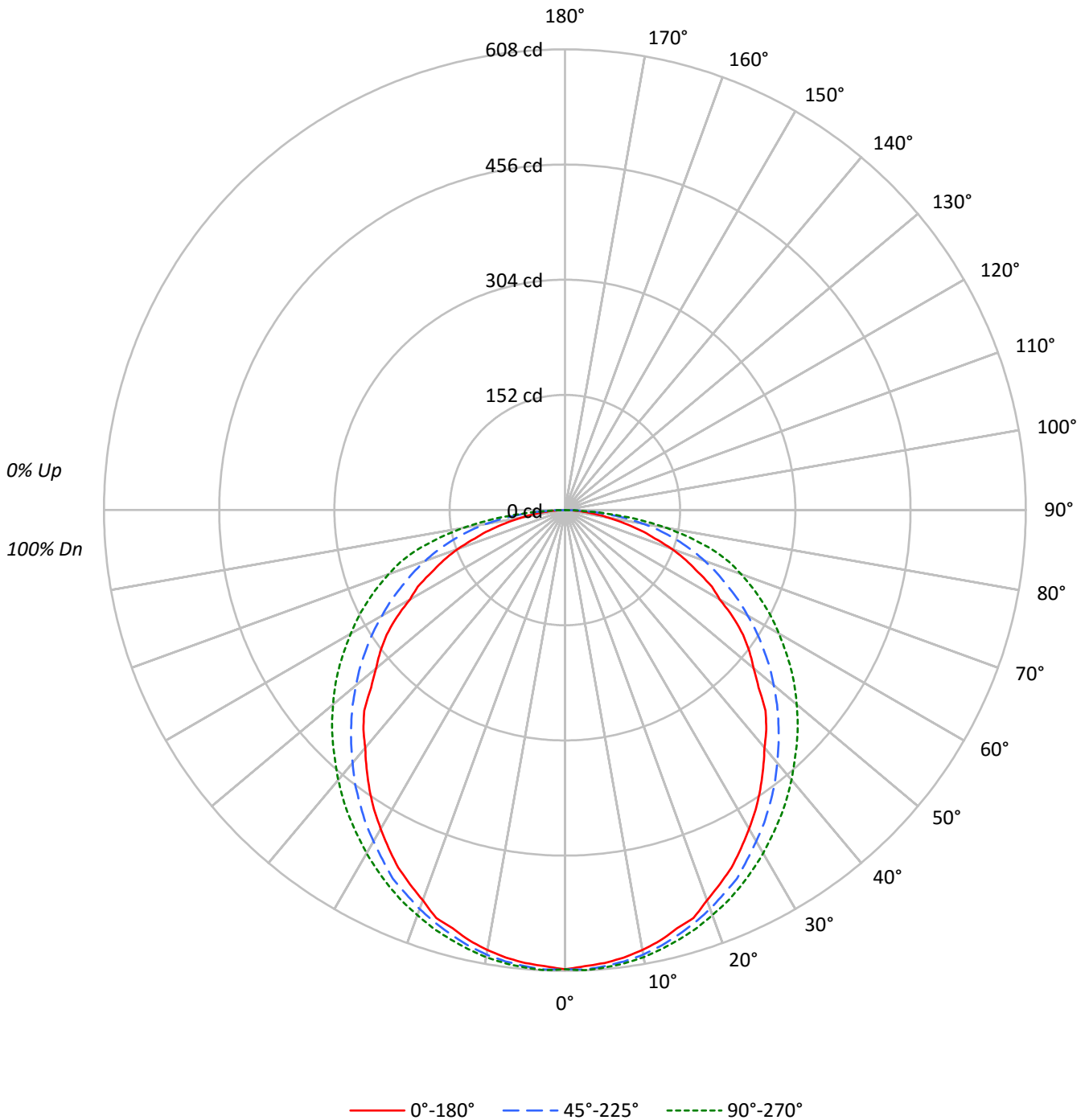
Lumens per Lamp: N/A  
Luminaire Lumens: 1806.0 lumens  
Efficiency: N/A  
Efficacy: 108.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1630	1630	1630
5°	1620	1632	1637
10°	1611	1627	1637
15°	1592	1616	1633
20°	1569	1604	1629
25°	1545	1594	1627
30°	1510	1569	1625
35°	1477	1550	1627
40°	1439	1530	1633
45°	1424	1517	1648
50°	1361	1505	1672
55°	1346	1500	1707
60°	1270	1498	1754
65°	1233	1508	1833
70°	1183	1544	1945
75°	1078	1591	2094
80°	924	1647	2117
85°	747	1575	1815



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.3	3.2
10°-20°	163.6	9.1
20°-30°	246.2	13.6
30°-40°	295.5	16.4
40°-50°	308.8	17.1
50°-60°	287.8	15.9
60°-70°	236.0	13.1
70°-80°	159.0	8.8
80°-90°	51.8	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°	467.1	25.9
0°-40°	762.5	42.2
0°-60°	1359.1	75.3
0°-90°	1806.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1806.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	600	602	604	605	606	57
15°	571	575	580	585	586	161
25°	520	524	537	545	548	239
35°	450	456	472	488	495	281
45°	374	377	398	423	433	286
55°	287	292	320	350	364	254
65°	194	202	237	271	288	193
75°	104	115	153	188	201	109
85°	24	35	51	60	59	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	605.9	605.9	605.9	605.9	605.9
2.5°	602.5	604.2	606.8	607.7	607.7
5°	599.9	601.6	604.2	605.1	605.9
7.5°	595.6	597.3	600.7	602.5	603.3
10°	589.5	591.2	595.6	598.1	599.0
12.5°	581.7	583.5	588.6	592.1	593.0
15°	571.4	574.8	580.0	585.2	586.0
17.5°	564.4	563.6	570.5	576.5	578.3
20°	548.0	552.3	560.1	567.0	568.8
22.5°	534.2	537.6	548.0	555.8	559.3
25°	520.4	523.8	536.8	544.6	548.0
27.5°	503.1	508.3	520.4	531.6	535.9
30°	485.8	491.0	504.8	517.8	522.9
32.5°	468.5	474.5	489.2	503.1	509.1
35°	449.5	455.5	471.9	488.4	495.3
37.5°	429.6	437.4	454.7	472.8	480.6
40°	409.7	417.5	435.6	456.4	465.0
42.5°	393.3	396.7	417.5	440.0	448.6
45°	374.3	376.9	398.5	422.7	433.1
47.5°	346.6	356.1	379.5	406.3	416.6
50°	325.0	335.4	359.6	388.1	399.3
52.5°	306.9	313.8	340.6	369.1	382.1
55°	287.0	292.2	319.8	350.1	363.9
57.5°	262.8	272.3	299.9	331.1	344.9
60°	236.0	248.1	278.3	312.0	325.9
62.5°	218.7	225.6	258.4	292.2	307.7
65°	193.6	202.3	236.8	271.4	287.8
67.5°	172.9	181.5	217.0	251.5	268.0
70°	150.4	159.0	196.2	230.8	247.2
72.5°	124.5	136.6	175.5	210.0	227.3
75°	103.7	115.0	153.0	187.6	201.4
77.5°	80.4	95.1	130.5	159.0	169.4
80°	59.6	74.3	106.3	127.1	136.6
82.5°	40.6	55.3	79.5	95.1	100.3
85°	24.2	34.6	51.0	59.6	58.8
87.5°	11.2	14.7	20.7	20.7	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)