

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: P312612

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-RDP-CP250-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: P312612  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
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-RDP-CP250-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET  
Light Source: (168) 4000K 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**

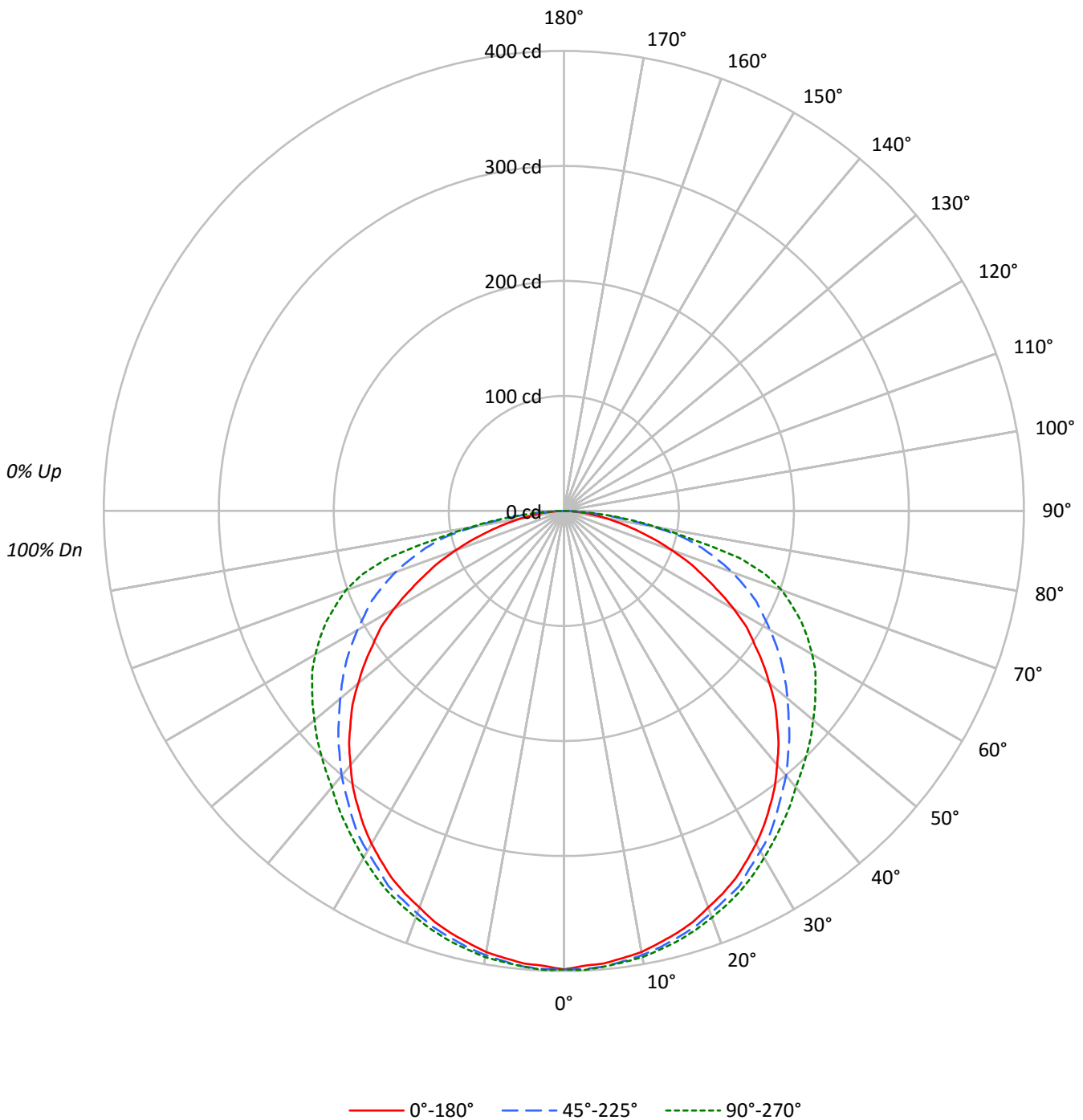
Lumens per Lamp: N/A  
Luminaire Lumens: 1269.0 lumens  
Efficiency: N/A  
Efficacy: 74.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1073	1073	1073
5°	1067	1074	1074
10°	1064	1071	1076
15°	1058	1069	1077
20°	1051	1067	1077
25°	1048	1070	1081
30°	1038	1062	1082
35°	1027	1058	1089
40°	1013	1056	1102
45°	998	1055	1137
50°	977	1063	1184
55°	951	1086	1253
60°	919	1115	1342
65°	856	1171	1450
70°	786	1227	1586
75°	689	1291	1641
80°	594	1229	1288
85°	519	892	979



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.7	3.0
10°-20°	108.3	8.5
20°-30°	165.2	13.0
30°-40°	201.7	15.9
40°-50°	215.6	17.0
50°-60°	208.1	16.4
60°-70°	179.2	14.1
70°-80°	121.2	9.6
80°-90°	32.0	2.5
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°	311.1	24.5
0°-40°	512.8	40.4
0°-60°	936.6	73.8
0°-90°	1269.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1269.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	399	399	399	399	399	
5°	395	396	398	398	398	38
15°	380	381	384	386	386	107
25°	353	355	360	362	364	162
35°	313	316	322	329	331	196
45°	262	267	277	291	299	202
55°	203	209	232	255	267	182
65°	134	148	184	213	228	134
75°	66	88	124	149	158	71
85°	17	23	29	30	32	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	398.6	398.6	398.6	398.6	398.6
2.5°	395.8	396.7	398.6	398.6	399.5
5°	394.9	395.8	397.7	397.7	397.7
7.5°	392.1	393.0	394.9	395.8	395.8
10°	389.3	390.2	392.1	393.0	393.9
12.5°	384.6	385.5	388.3	390.2	390.2
15°	379.9	380.9	383.7	385.5	386.5
17.5°	374.3	376.2	379.0	380.9	381.8
20°	366.9	368.7	372.5	375.3	376.2
22.5°	360.3	362.2	365.9	368.7	370.6
25°	352.9	354.7	360.3	362.2	364.1
27.5°	343.5	345.4	350.1	353.8	356.6
30°	334.2	336.1	341.7	346.3	348.2
32.5°	323.9	326.7	333.3	337.0	339.8
35°	312.7	315.5	322.1	328.6	331.4
37.5°	301.5	304.3	310.9	319.3	323.0
40°	288.5	292.2	300.6	311.8	313.7
42.5°	276.3	281.0	288.5	301.5	306.2
45°	262.3	267.0	277.3	291.3	298.7
47.5°	249.3	253.9	265.1	281.9	291.3
50°	233.4	239.9	253.9	273.5	282.9
52.5°	218.4	224.0	242.7	264.2	275.4
55°	202.6	209.1	231.5	254.9	267.0
57.5°	188.6	194.2	219.4	245.5	259.5
60°	170.8	178.3	207.2	235.2	249.3
62.5°	152.2	163.4	195.1	224.0	239.0
65°	134.4	147.5	183.9	212.8	227.8
67.5°	118.6	132.6	169.9	200.7	214.7
70°	99.9	117.6	155.9	185.8	201.6
72.5°	83.1	102.7	140.0	169.9	183.9
75°	66.3	87.8	124.2	149.4	157.8
77.5°	51.3	71.9	106.4	113.9	114.8
80°	38.3	56.9	79.3	80.3	83.1
82.5°	26.1	40.1	51.3	56.0	56.9
85°	16.8	23.3	28.9	29.9	31.7
87.5°	7.5	8.4	10.3	9.3	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)