

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: P312611

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-RDP-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: P312611  
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-3500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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**

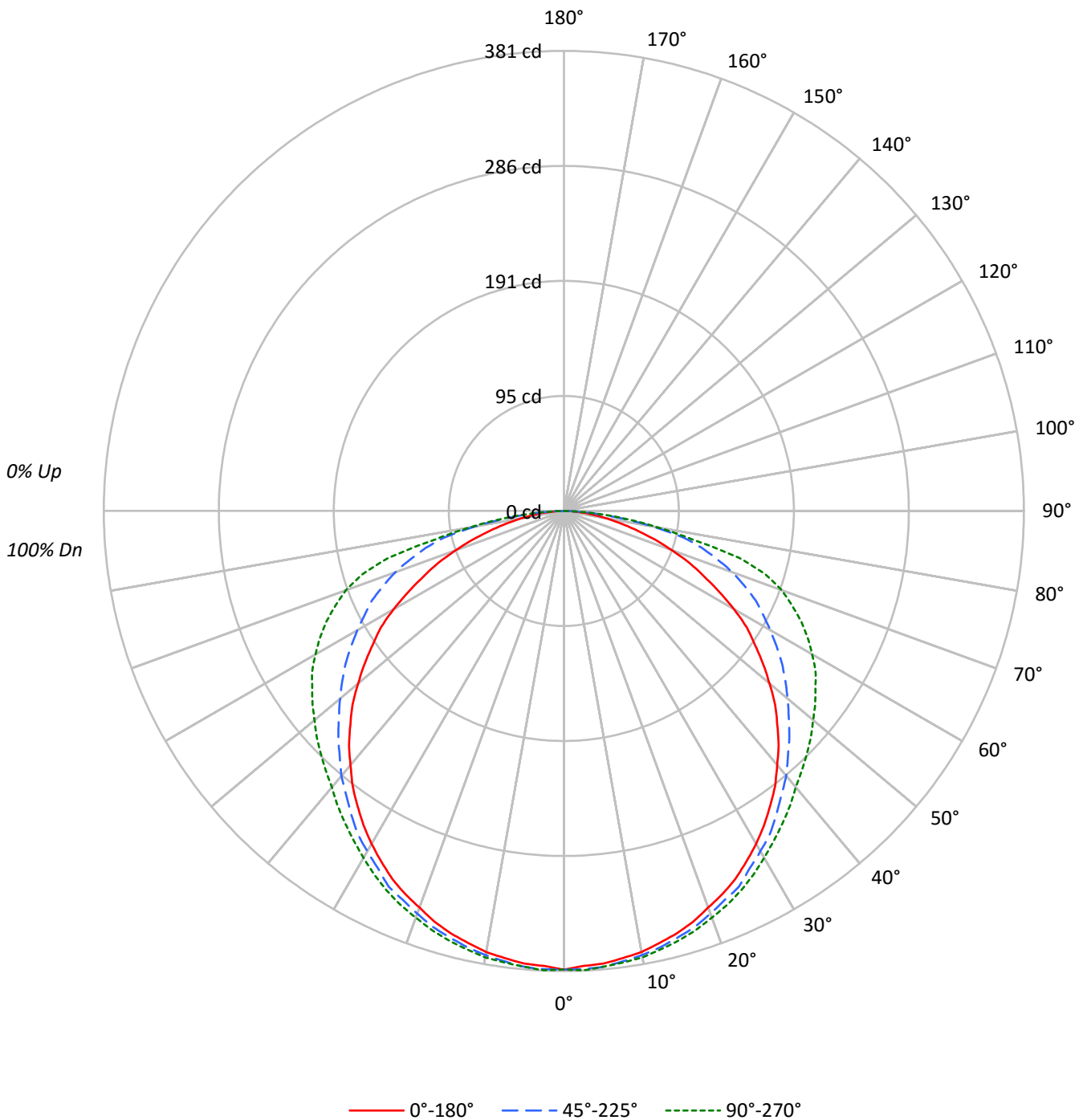
Lumens per Lamp: N/A  
Luminaire Lumens: 1209.0 lumens  
Efficiency: N/A  
Efficacy: 72.4 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1022	1022	1022
5°	1016	1024	1024
10°	1013	1021	1026
15°	1008	1018	1026
20°	1001	1016	1026
25°	998	1019	1030
30°	989	1011	1031
35°	979	1008	1037
40°	965	1006	1050
45°	951	1005	1083
50°	931	1013	1128
55°	905	1035	1194
60°	876	1062	1278
65°	816	1116	1382
70°	749	1168	1511
75°	656	1230	1563
80°	566	1172	1227
85°	494	852	932



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.9	3.0
10°-20°	103.1	8.5
20°-30°	157.4	13.0
30°-40°	192.1	15.9
40°-50°	205.5	17.0
50°-60°	198.3	16.4
60°-70°	170.7	14.1
70°-80°	115.5	9.6
80°-90°	30.5	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°	296.4	24.5
0°-40°	488.6	40.4
0°-60°	892.3	73.8
0°-90°	1209.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1209.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	380	380	380	380	380	
5°	376	377	379	379	379	36
15°	362	363	366	367	368	102
25°	336	338	343	345	347	155
35°	298	301	307	313	316	186
45°	250	254	264	278	285	193
55°	193	199	221	243	254	173
65°	128	140	175	203	217	127
75°	63	84	118	142	150	68
85°	16	22	28	28	30	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	379.8	379.8	379.8	379.8	379.8
2.5°	377.1	378.0	379.8	379.8	380.7
5°	376.2	377.1	378.9	378.9	378.9
7.5°	373.5	374.4	376.2	377.1	377.1
10°	370.9	371.8	373.5	374.4	375.3
12.5°	366.4	367.3	370.0	371.8	371.8
15°	362.0	362.9	365.5	367.3	368.2
17.5°	356.6	358.4	361.1	362.9	363.8
20°	349.5	351.3	354.9	357.5	358.4
22.5°	343.3	345.1	348.6	351.3	353.1
25°	336.2	338.0	343.3	345.1	346.9
27.5°	327.3	329.1	333.5	337.1	339.7
30°	318.4	320.2	325.5	330.0	331.7
32.5°	308.6	311.3	317.5	321.1	323.7
35°	297.9	300.6	306.8	313.1	315.7
37.5°	287.3	289.9	296.2	304.2	307.7
40°	274.8	278.4	286.4	297.1	298.8
42.5°	263.3	267.7	274.8	287.3	291.7
45°	249.9	254.4	264.1	277.5	284.6
47.5°	237.5	241.9	252.6	268.6	277.5
50°	222.3	228.6	241.9	260.6	269.5
52.5°	208.1	213.5	231.2	251.7	262.4
55°	193.0	199.2	220.6	242.8	254.4
57.5°	179.7	185.0	209.0	233.9	247.2
60°	162.8	169.9	197.4	224.1	237.5
62.5°	145.0	155.6	185.9	213.5	227.7
65°	128.1	140.5	175.2	202.8	217.0
67.5°	113.0	126.3	161.9	191.2	204.6
70°	95.2	112.1	148.5	177.0	192.1
72.5°	79.2	97.8	133.4	161.9	175.2
75°	63.1	83.6	118.3	142.3	150.3
77.5°	48.9	68.5	101.4	108.5	109.4
80°	36.5	54.3	75.6	76.5	79.2
82.5°	24.9	38.2	48.9	53.4	54.3
85°	16.0	22.2	27.6	28.5	30.2
87.5°	7.1	8.0	9.8	8.9	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)