

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: P312923

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-S-CA125-W2A-U-4500K**

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: P312923  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-24HE-UNV-L83050-S-CA125-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 4500K 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**

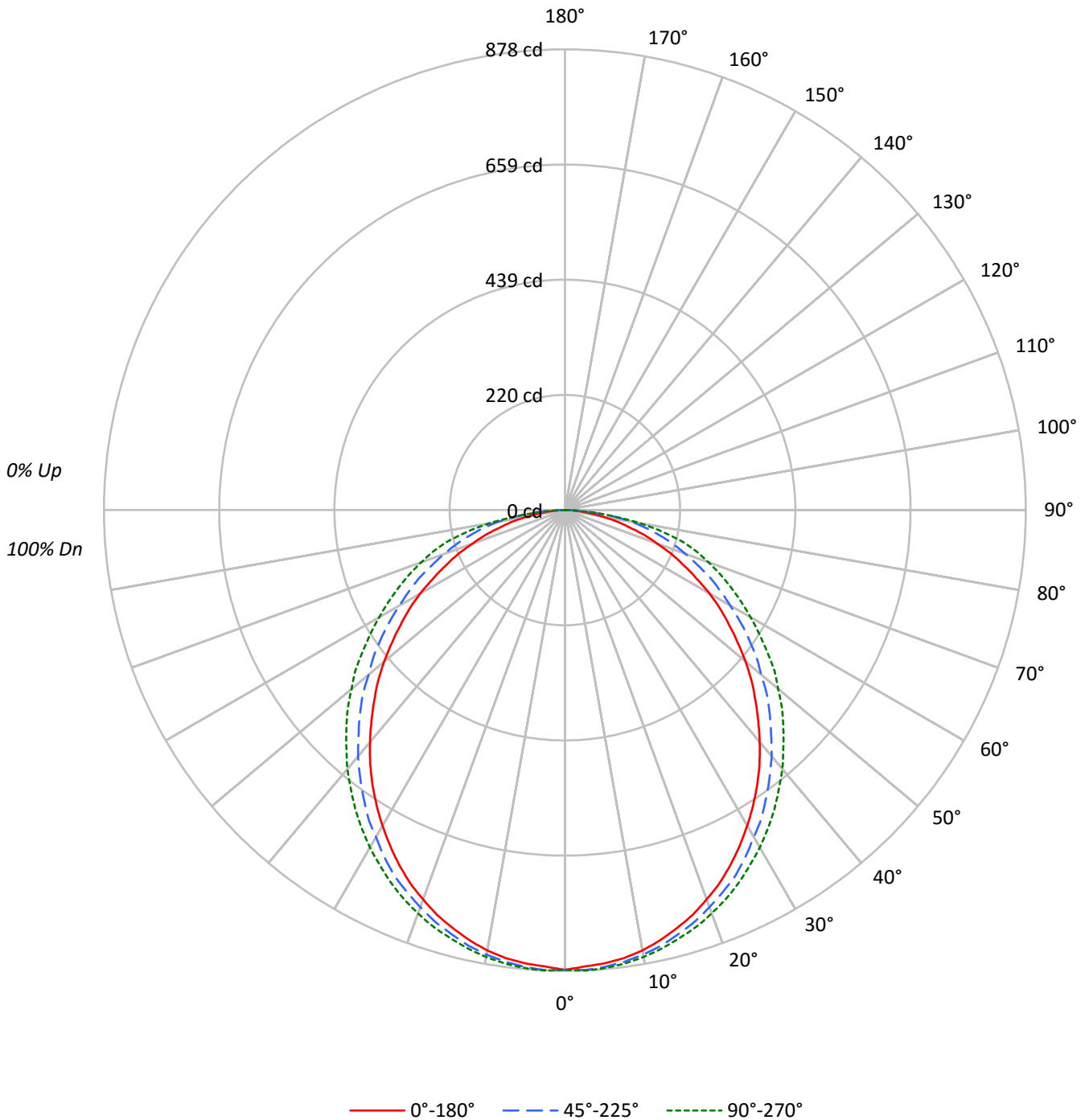
Lumens per Lamp: N/A  
Luminaire Lumens: 2445.0 lumens  
Efficiency: N/A  
Efficacy: 123.5 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	2358	2358	2358
5°	2342	2360	2367
10°	2329	2350	2363
15°	2298	2330	2352
20°	2261	2306	2342
25°	2215	2283	2327
30°	2159	2237	2307
35°	2099	2196	2286
40°	2028	2152	2264
45°	1954	2101	2240
50°	1882	2044	2221
55°	1793	2007	2205
60°	1713	1958	2198
65°	1598	1947	2223
70°	1472	1930	2289
75°	1329	1957	2408
80°	1150	2015	2263
85°	951	1692	1692



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.9	3.4
10°-20°	235.8	9.6
20°-30°	352.8	14.4
30°-40°	417.8	17.1
40°-50°	425.8	17.4
50°-60°	381.6	15.6
60°-70°	298.8	12.2
70°-80°	192.7	7.9
80°-90°	56.9	2.3
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°	671.4	27.5
0°-40°	1089.2	44.5
0°-60°	1896.7	77.6
0°-90°	2445.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2445.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	876	876	876	876	876	
5°	867	869	874	875	876	82
15°	825	829	836	843	844	233
25°	746	753	769	779	784	343
35°	639	647	668	689	696	399
45°	513	525	552	581	589	396
55°	382	395	428	458	470	343
65°	251	266	306	335	349	249
75°	128	147	188	220	232	137
85°	31	42	55	55	55	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	876.1	876.1	876.1	876.1	876.1
2.5°	870.4	872.7	877.3	878.4	878.4
5°	867.0	869.3	873.8	875.0	876.1
7.5°	861.3	862.4	868.1	870.4	871.6
10°	852.2	854.4	860.1	863.6	864.7
12.5°	839.6	843.0	849.9	854.4	855.6
15°	824.8	829.3	836.2	843.0	844.2
17.5°	808.8	813.4	822.5	830.5	832.8
20°	789.4	795.1	805.4	814.5	817.9
22.5°	770.0	774.6	787.1	798.5	802.0
25°	746.1	752.9	768.9	779.2	783.7
27.5°	721.0	729.0	744.9	758.6	763.2
30°	694.7	702.7	719.8	736.9	742.6
32.5°	667.4	676.5	697.0	714.1	719.8
35°	638.8	646.8	668.5	689.0	695.9
37.5°	609.2	616.0	641.1	662.8	669.6
40°	577.2	586.4	612.6	637.7	644.5
42.5°	545.3	555.6	581.8	609.2	616.0
45°	513.4	524.8	552.1	580.7	588.6
47.5°	482.6	491.7	522.5	549.9	561.3
50°	449.5	458.6	488.3	519.1	530.5
52.5°	415.2	427.8	459.7	489.4	503.1
55°	382.2	394.7	427.8	457.5	470.0
57.5°	351.4	361.6	395.9	426.7	439.2
60°	318.3	327.4	363.9	397.0	408.4
62.5°	282.9	296.6	334.2	365.0	378.7
65°	251.0	265.8	305.7	335.4	349.1
67.5°	221.3	235.0	273.8	305.7	320.6
70°	187.1	205.3	245.3	277.2	290.9
72.5°	159.7	175.7	216.7	248.7	263.5
75°	127.8	147.2	188.2	220.2	231.6
77.5°	101.5	120.9	159.7	184.8	190.5
80°	74.2	93.5	130.0	142.6	146.0
82.5°	50.2	68.4	93.5	97.0	98.1
85°	30.8	42.2	54.8	54.8	54.8
87.5°	14.8	17.1	19.4	18.3	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)