

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: P308404

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-RDP-CP187-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: P308404  
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: 22FCZ2-24HE-UNV-L82765-RDP-CP187-W2A-U-3500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1343.0 lumens  
Efficiency: N/A  
Efficacy: 70.7 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

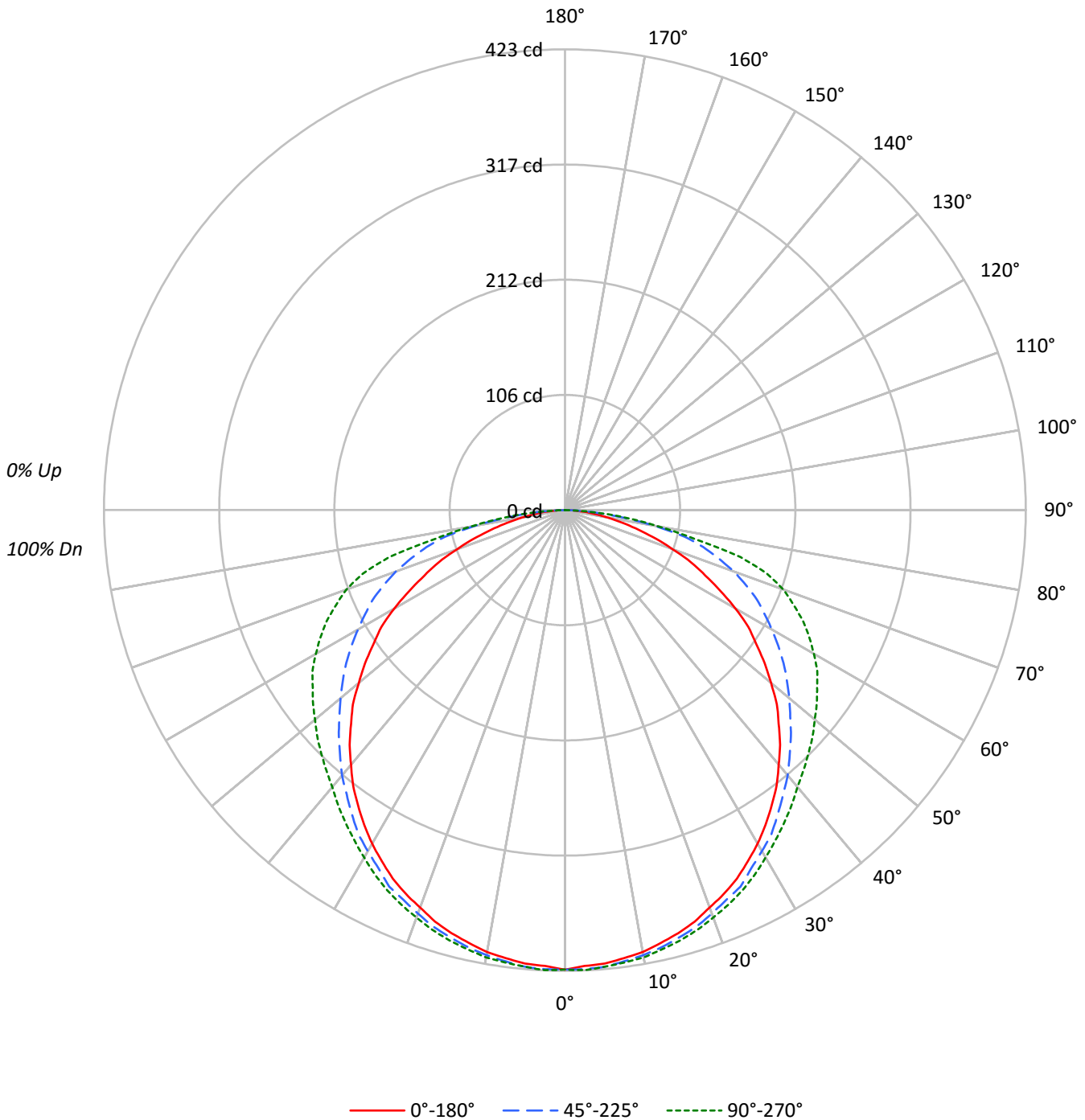
Input Watts (W): 19  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1135	1135	1135
5°	1129	1137	1137
10°	1126	1134	1139
15°	1120	1131	1139
20°	1112	1129	1140
25°	1109	1132	1144
30°	1099	1124	1145
35°	1087	1120	1152
40°	1072	1117	1166
45°	1056	1117	1203
50°	1034	1125	1253
55°	1006	1149	1326
60°	973	1180	1420
65°	906	1239	1535
70°	832	1298	1679
75°	729	1366	1736
80°	628	1302	1362
85°	550	945	1037



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.9	3.0
10°-20°	114.6	8.5
20°-30°	174.8	13.0
30°-40°	213.4	15.9
40°-50°	228.2	17.0
50°-60°	220.3	16.4
60°-70°	189.6	14.1
70°-80°	128.3	9.6
80°-90°	33.9	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°	329.3	24.5
0°-40°	542.7	40.4
0°-60°	991.2	73.8
0°-90°	1343.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1343.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	422	422	422	422	422	
5°	418	419	421	421	421	40
15°	402	403	406	408	409	113
25°	373	375	381	383	385	172
35°	331	334	341	348	351	207
45°	278	283	293	308	316	214
55°	214	221	245	270	283	192
65°	142	156	195	225	241	141
75°	70	93	131	158	167	75
85°	18	25	31	32	34	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	421.9	421.9	421.9	421.9	421.9
2.5°	418.9	419.9	421.9	421.9	422.8
5°	417.9	418.9	420.9	420.9	420.9
7.5°	414.9	415.9	417.9	418.9	418.9
10°	412.0	413.0	414.9	415.9	416.9
12.5°	407.0	408.0	411.0	413.0	413.0
15°	402.1	403.1	406.1	408.0	409.0
17.5°	396.2	398.1	401.1	403.1	404.1
20°	388.3	390.2	394.2	397.2	398.1
22.5°	381.4	383.3	387.3	390.2	392.2
25°	373.4	375.4	381.4	383.3	385.3
27.5°	363.6	365.5	370.5	374.4	377.4
30°	353.7	355.7	361.6	366.5	368.5
32.5°	342.8	345.8	352.7	356.7	359.6
35°	331.0	333.9	340.8	347.8	350.7
37.5°	319.1	322.1	329.0	337.9	341.8
40°	305.3	309.2	318.1	330.0	332.0
42.5°	292.4	297.4	305.3	319.1	324.1
45°	277.6	282.6	293.4	308.2	316.1
47.5°	263.8	268.7	280.6	298.4	308.2
50°	247.0	253.9	268.7	289.5	299.4
52.5°	231.2	237.1	256.9	279.6	291.4
55°	214.4	221.3	245.0	269.7	282.6
57.5°	199.6	205.5	232.2	259.8	274.7
60°	180.8	188.7	219.3	249.0	263.8
62.5°	161.0	172.9	206.5	237.1	252.9
65°	142.3	156.1	194.6	225.3	241.1
67.5°	125.5	140.3	179.8	212.4	227.2
70°	105.7	124.5	165.0	196.6	213.4
72.5°	87.9	108.7	148.2	179.8	194.6
75°	70.1	92.9	131.4	158.1	167.0
77.5°	54.3	76.1	112.6	120.5	121.5
80°	40.5	60.3	84.0	85.0	87.9
82.5°	27.7	42.5	54.3	59.3	60.3
85°	17.8	24.7	30.6	31.6	33.6
87.5°	7.9	8.9	10.9	9.9	9.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)