

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: P309850

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP187-W2A-U-6500K**

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: P309850  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-30HE-UNV-L82765-RDP-CP187-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET  
Light Source: (336) 6500K 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: 1846.0 lumens  
Efficiency: N/A  
Efficacy: 83.9 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

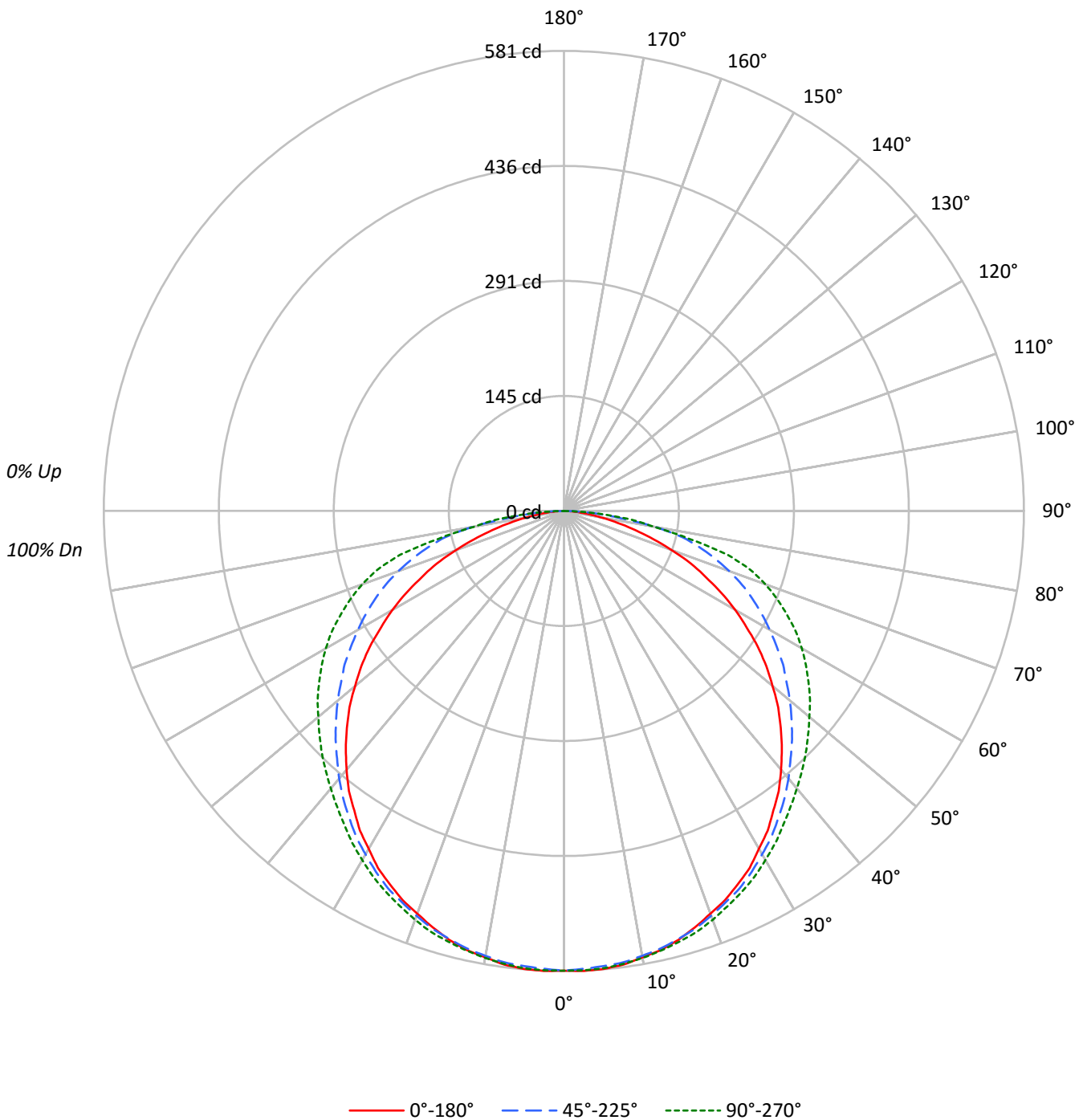
Input Watts (W): 22  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	781	781	781
5°	784	779	783
10°	782	779	783
15°	781	779	784
20°	775	779	787
25°	772	780	788
30°	765	778	791
35°	758	776	794
40°	749	775	804
45°	737	775	822
50°	721	780	847
55°	702	793	885
60°	673	808	934
65°	630	837	991
70°	573	875	1066
75°	486	923	1114
80°	383	929	901
85°	283	707	792



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.1	3.0
10°-20°	158.5	8.6
20°-30°	242.4	13.1
30°-40°	296.3	16.0
40°-50°	315.8	17.1
50°-60°	301.9	16.4
60°-70°	255.8	13.9
70°-80°	171.9	9.3
80°-90°	48.5	2.6
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°	455.9	24.7
0°-40°	752.2	40.7
0°-60°	1369.9	74.2
0°-90°	1846.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1846.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	580	580	580	580	580	
5°	580	580	577	580	580	55
15°	560	560	560	564	563	158
25°	520	522	526	530	531	240
35°	462	465	472	482	484	289
45°	387	394	408	425	432	299
55°	299	310	338	364	377	267
65°	198	218	263	298	311	196
75°	93	127	178	208	214	100
85°	18	38	46	49	51	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	580.5	580.5	580.5	580.5	580.5
2.5°	581.4	581.4	578.7	580.5	580.5
5°	580.5	579.6	576.9	579.6	579.6
7.5°	577.8	576.9	575.0	577.8	576.9
10°	572.3	572.3	570.4	573.2	573.2
12.5°	567.7	566.8	565.9	569.5	568.6
15°	560.4	560.4	559.5	564.0	563.1
17.5°	551.2	552.1	553.0	556.7	557.6
20°	541.1	543.0	543.9	549.4	549.4
22.5°	532.0	532.9	534.7	540.2	540.2
25°	520.1	521.9	525.6	530.2	531.1
27.5°	508.2	509.1	513.7	520.1	521.0
30°	492.6	495.4	500.9	508.2	509.1
32.5°	478.9	481.6	488.0	495.4	497.2
35°	461.5	465.1	472.5	481.6	483.5
37.5°	445.9	448.7	457.8	467.9	470.6
40°	426.7	432.2	441.3	453.2	457.8
42.5°	407.5	413.0	423.9	439.5	445.0
45°	387.3	393.7	407.5	424.9	432.2
47.5°	367.2	374.5	390.1	410.2	418.4
50°	344.3	353.4	372.7	395.6	404.7
52.5°	322.3	333.3	354.4	380.0	391.9
55°	299.4	310.4	337.9	364.4	377.2
57.5°	273.8	288.4	318.6	348.9	362.6
60°	250.0	263.7	300.3	333.3	347.0
62.5°	224.3	242.6	282.0	316.8	330.5
65°	197.8	217.9	262.8	297.6	311.3
67.5°	174.0	195.9	243.6	278.4	292.1
70°	145.6	173.1	222.5	257.3	271.0
72.5°	119.0	149.2	200.5	234.4	247.2
75°	93.4	127.3	177.6	207.8	214.3
77.5°	69.6	105.3	153.8	166.6	162.1
80°	49.4	84.2	119.9	113.5	116.3
82.5°	32.0	64.1	74.2	84.2	87.0
85°	18.3	37.5	45.8	49.4	51.3
87.5°	8.2	13.7	18.3	18.3	17.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)