

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: P308316

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-HRP-CP187-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: P308316
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-44HE-UNV-L82765-HRP-CP187-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 2938.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

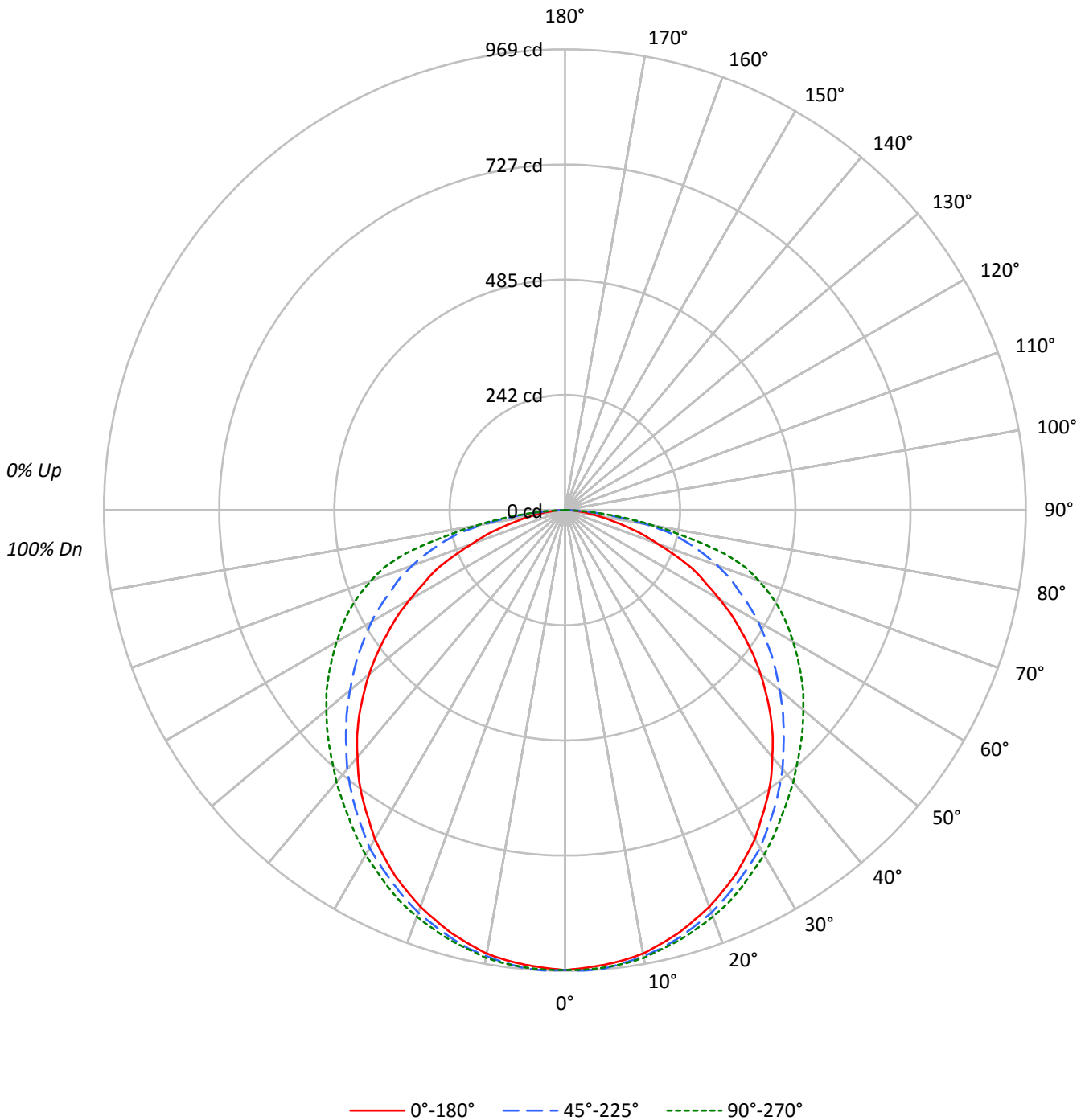
Input Watts (W): 37.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2604	2604	2604
5°	2593	2613	2608
10°	2588	2603	2613
15°	2566	2592	2607
20°	2542	2579	2606
25°	2515	2559	2603
30°	2482	2551	2603
35°	2435	2521	2600
40°	2383	2500	2624
45°	2328	2476	2666
50°	2250	2467	2739
55°	2148	2487	2843
60°	2025	2524	2983
65°	1911	2572	3186
70°	1633	2683	3412
75°	1368	2794	3545
80°	1120	2700	2958
85°	973	2004	2174



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.7	3.1
10°-20°	262.3	8.9
20°-30°	397.5	13.5
30°-40°	480.0	16.3
40°-50°	504.3	17.2
50°-60°	474.5	16.2
60°-70°	395.7	13.5
70°-80°	262.2	8.9
80°-90°	69.9	2.4
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°	751.5	25.6
0°-40°	1231.4	41.9
0°-60°	2210.3	75.2
0°-90°	2938.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2938.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	968	968	968	968	968	
5°	960	962	968	968	966	91
15°	921	925	930	934	936	260
25°	847	852	862	873	877	390
35°	741	749	767	784	791	464
45°	612	621	650	684	701	471
55°	458	478	530	584	606	410
65°	300	326	404	471	500	292
75°	132	184	269	324	341	143
85°	32	48	65	70	70	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	967.5	967.5	967.5	967.5	967.5
2.5°	963.7	965.6	969.3	969.3	967.5
5°	960.0	961.9	967.5	967.5	965.6
7.5°	954.5	956.3	960.0	963.7	961.9
10°	947.1	948.9	952.6	956.3	956.3
12.5°	934.1	935.9	943.4	945.2	945.2
15°	921.1	924.8	930.4	934.1	935.9
17.5°	904.4	908.1	915.6	923.0	923.0
20°	887.8	891.5	900.7	908.1	910.0
22.5°	867.4	872.9	882.2	891.5	895.2
25°	847.0	852.5	861.8	872.9	876.6
27.5°	822.9	828.4	841.4	854.4	856.2
30°	798.8	804.4	821.0	832.2	837.7
32.5°	769.1	776.6	793.2	809.9	815.5
35°	741.3	748.8	767.3	784.0	791.4
37.5°	711.7	719.1	739.5	759.9	769.1
40°	678.3	687.6	711.7	733.9	746.9
42.5°	646.8	656.1	680.2	709.8	722.8
45°	611.6	620.9	650.5	683.9	700.6
47.5°	574.5	585.7	620.9	661.6	678.3
50°	537.5	550.4	589.4	635.7	654.2
52.5°	498.6	515.2	559.7	609.8	632.0
55°	457.8	478.2	530.1	583.8	606.0
57.5°	418.9	437.4	498.6	556.0	580.1
60°	376.2	400.3	468.9	528.2	554.2
62.5°	335.5	361.4	437.4	500.4	528.2
65°	300.2	326.2	404.0	470.8	500.4
67.5°	253.9	289.1	376.2	439.2	468.9
70°	207.6	255.8	341.0	405.9	433.7
72.5°	172.4	218.7	305.8	370.7	396.6
75°	131.6	183.5	268.7	324.3	341.0
77.5°	98.2	152.0	229.8	257.6	259.5
80°	72.3	116.8	174.2	183.5	190.9
82.5°	50.0	81.5	113.1	124.2	127.9
85°	31.5	48.2	64.9	70.4	70.4
87.5°	16.7	18.5	22.2	22.2	22.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)