

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: P308273

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-HRP-CP187-W2A-U-5500K**

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: P308273
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: 22FCZ2-39HE-UNV-L82765-HRP-CP187-W2A-U-5500K
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: 2681.0 lumens
Efficiency: N/A
Efficacy: 80.5 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

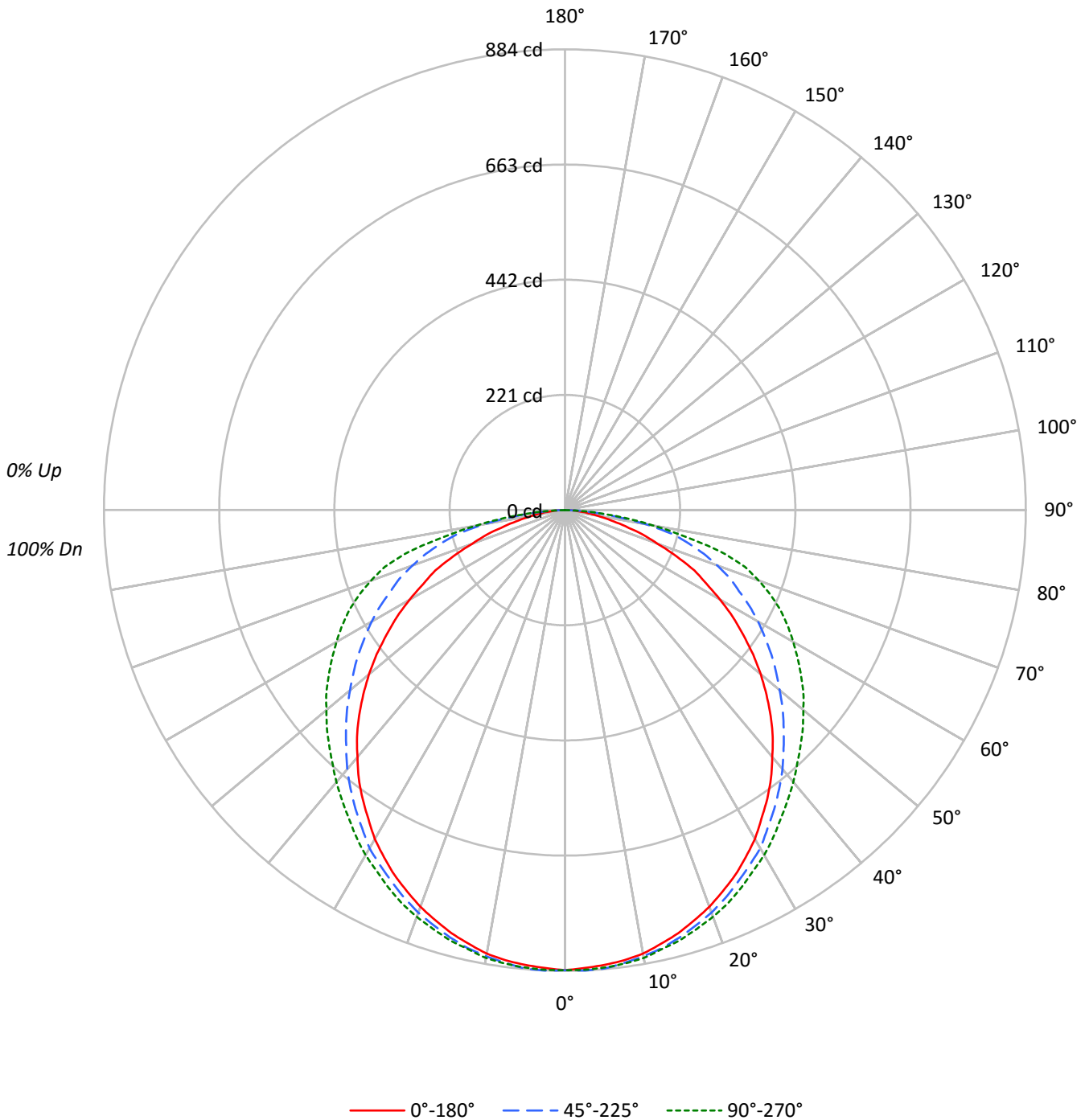
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2376	2376	2376
5°	2367	2385	2380
10°	2361	2375	2385
15°	2342	2365	2379
20°	2320	2354	2378
25°	2295	2335	2375
30°	2265	2328	2375
35°	2222	2300	2372
40°	2174	2281	2394
45°	2124	2259	2433
50°	2053	2251	2499
55°	1960	2269	2594
60°	1848	2303	2722
65°	1745	2348	2907
70°	1490	2448	3113
75°	1249	2549	3236
80°	1023	2464	2700
85°	889	1828	1985



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.7	3.1
10°-20°	239.3	8.9
20°-30°	362.7	13.5
30°-40°	438.0	16.3
40°-50°	460.2	17.2
50°-60°	433.0	16.2
60°-70°	361.0	13.5
70°-80°	239.2	8.9
80°-90°	63.8	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°	685.7	25.6
0°-40°	1123.7	41.9
0°-60°	2017.0	75.2
0°-90°	2681.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2681.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	883	883	883	883	883	
5°	876	878	883	883	881	83
15°	840	844	849	852	854	237
25°	773	778	786	797	800	356
35°	676	683	700	715	722	423
45°	558	567	594	624	639	430
55°	418	436	484	533	553	374
65°	274	298	369	430	457	267
75°	120	167	245	296	311	130
85°	29	44	59	64	64	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	882.8	882.8	882.8	882.8	882.8
2.5°	879.4	881.1	884.5	884.5	882.8
5°	876.1	877.7	882.8	882.8	881.1
7.5°	871.0	872.7	876.1	879.4	877.7
10°	864.2	865.9	869.3	872.7	872.7
12.5°	852.4	854.1	860.8	862.5	862.5
15°	840.5	843.9	849.0	852.4	854.1
17.5°	825.3	828.7	835.5	842.2	842.2
20°	810.1	813.5	821.9	828.7	830.4
22.5°	791.5	796.6	805.0	813.5	816.9
25°	772.9	778.0	786.4	796.6	800.0
27.5°	750.9	756.0	767.8	779.7	781.3
30°	728.9	734.0	749.2	759.4	764.4
32.5°	701.9	708.6	723.8	739.1	744.1
35°	676.5	683.3	700.2	715.4	722.2
37.5°	649.4	656.2	674.8	693.4	701.9
40°	619.0	627.4	649.4	669.7	681.6
42.5°	590.2	598.7	620.7	647.7	659.6
45°	558.1	566.6	593.6	624.1	639.3
47.5°	524.3	534.4	566.6	603.8	619.0
50°	490.5	502.3	537.8	580.1	597.0
52.5°	454.9	470.2	510.8	556.4	576.7
55°	417.7	436.3	483.7	532.7	553.0
57.5°	382.2	399.1	454.9	507.4	529.4
60°	343.3	365.3	427.9	482.0	505.7
62.5°	306.1	329.8	399.1	456.6	482.0
65°	274.0	297.7	368.7	429.6	456.6
67.5°	231.7	263.8	343.3	400.8	427.9
70°	189.4	233.4	311.2	370.4	395.7
72.5°	157.3	199.6	279.1	338.2	361.9
75°	120.1	167.4	245.2	296.0	311.2
77.5°	89.6	138.7	209.7	235.1	236.8
80°	66.0	106.5	159.0	167.4	174.2
82.5°	45.7	74.4	103.2	113.3	116.7
85°	28.8	44.0	59.2	64.3	64.3
87.5°	15.2	16.9	20.3	20.3	20.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)