

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: P312559

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-HRP-CP187-W2A-U-5000K**

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: P312559
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-L83050-HRP-CP187-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 5000K 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: 2833.0 lumens
Efficiency: N/A
Efficacy: 83.3 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

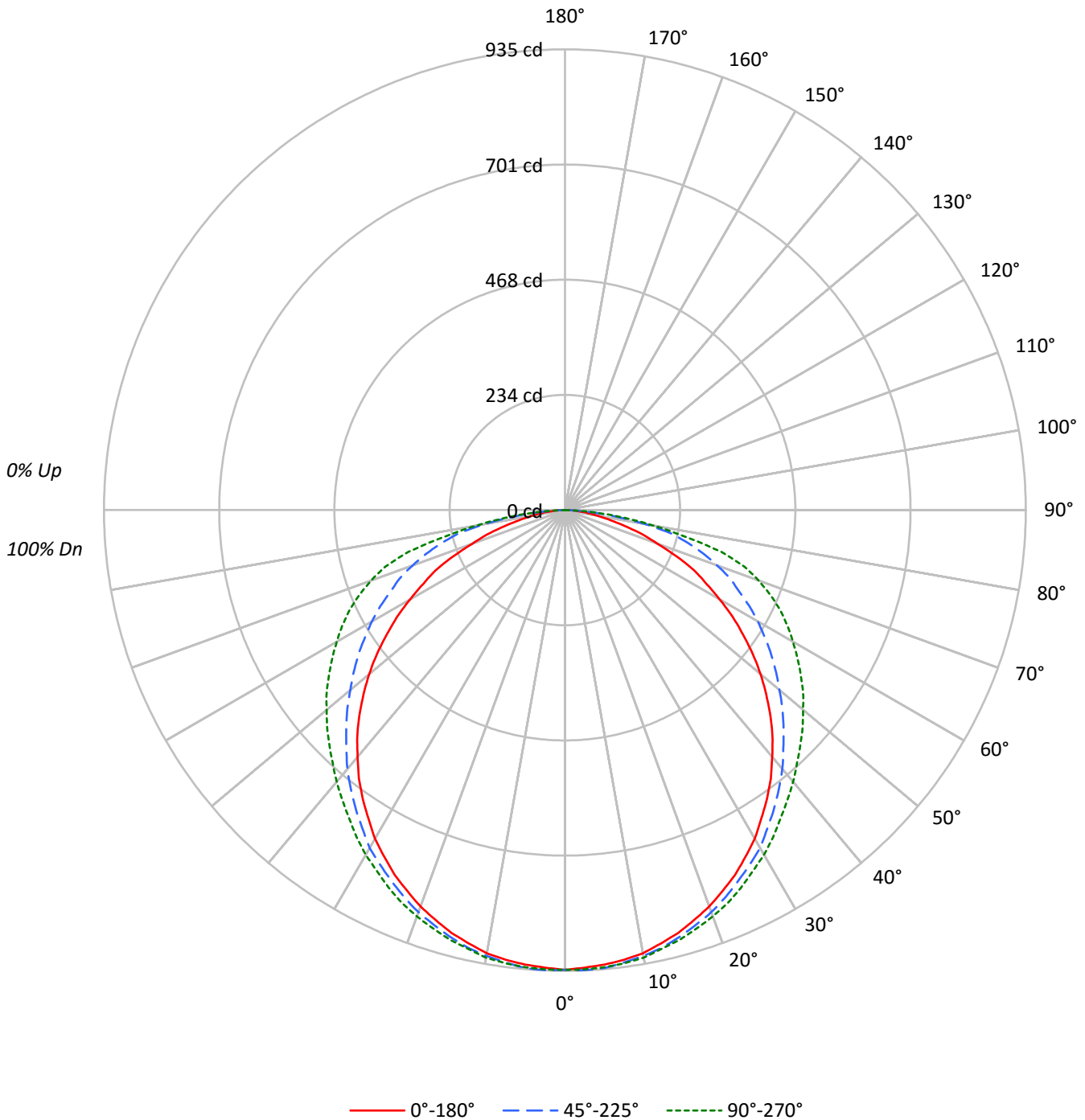
Input Watts (W): 34
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2510	2510	2510
5°	2501	2520	2515
10°	2495	2510	2520
15°	2474	2499	2514
20°	2451	2487	2513
25°	2425	2467	2510
30°	2393	2460	2510
35°	2348	2431	2507
40°	2298	2411	2530
45°	2244	2387	2571
50°	2170	2379	2641
55°	2071	2398	2742
60°	1953	2433	2876
65°	1843	2481	3072
70°	1575	2587	3290
75°	1319	2694	3419
80°	1080	2603	2853
85°	939	1930	2096



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.4	3.1
10°-20°	252.9	8.9
20°-30°	383.3	13.5
30°-40°	462.8	16.3
40°-50°	486.3	17.2
50°-60°	457.6	16.2
60°-70°	381.5	13.5
70°-80°	252.8	8.9
80°-90°	67.4	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°	724.6	25.6
0°-40°	1187.4	41.9
0°-60°	2131.3	75.2
0°-90°	2833.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2833.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	933	933	933	933	933	
5°	926	928	933	933	931	88
15°	888	892	897	901	902	250
25°	817	822	831	842	845	376
35°	715	722	740	756	763	447
45°	590	599	627	659	676	454
55°	441	461	511	563	584	395
65°	290	314	390	454	482	282
75°	127	177	259	313	329	138
85°	30	46	62	68	68	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	932.9	932.9	932.9	932.9	932.9
2.5°	929.3	931.1	934.7	934.7	932.9
5°	925.7	927.5	932.9	932.9	931.1
7.5°	920.4	922.2	925.7	929.3	927.5
10°	913.2	915.0	918.6	922.2	922.2
12.5°	900.7	902.5	909.6	911.4	911.4
15°	888.2	891.8	897.1	900.7	902.5
17.5°	872.1	875.7	882.8	890.0	890.0
20°	856.0	859.6	868.5	875.7	877.5
22.5°	836.4	841.7	850.7	859.6	863.2
25°	816.7	822.1	831.0	841.7	845.3
27.5°	793.5	798.8	811.4	823.9	825.6
30°	770.2	775.6	791.7	802.4	807.8
32.5°	741.7	748.8	764.9	781.0	786.3
35°	714.8	722.0	739.9	756.0	763.1
37.5°	686.3	693.4	713.1	732.7	741.7
40°	654.1	663.0	686.3	707.7	720.2
42.5°	623.7	632.6	655.9	684.5	697.0
45°	589.7	598.7	627.3	659.4	675.5
47.5°	554.0	564.7	598.7	638.0	654.1
50°	518.3	530.8	568.3	613.0	630.9
52.5°	480.7	496.8	539.7	588.0	609.4
55°	441.4	461.1	511.1	562.9	584.4
57.5°	403.9	421.8	480.7	536.1	559.4
60°	362.8	386.0	452.1	509.3	534.3
62.5°	323.5	348.5	421.8	482.5	509.3
65°	289.5	314.5	389.6	453.9	482.5
67.5°	244.8	278.8	362.8	423.5	452.1
70°	200.2	246.6	328.8	391.4	418.2
72.5°	166.2	210.9	294.9	357.4	382.4
75°	126.9	176.9	259.1	312.7	328.8
77.5°	94.7	146.5	221.6	248.4	250.2
80°	69.7	112.6	168.0	176.9	184.1
82.5°	48.3	78.6	109.0	119.7	123.3
85°	30.4	46.5	62.5	67.9	67.9
87.5°	16.1	17.9	21.4	21.4	21.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)