

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: P312557

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-HRP-CP187-W2A-U-4000K**

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: P312557
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-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 4000K 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: 2806.0 lumens
Efficiency: N/A
Efficacy: 84.8 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

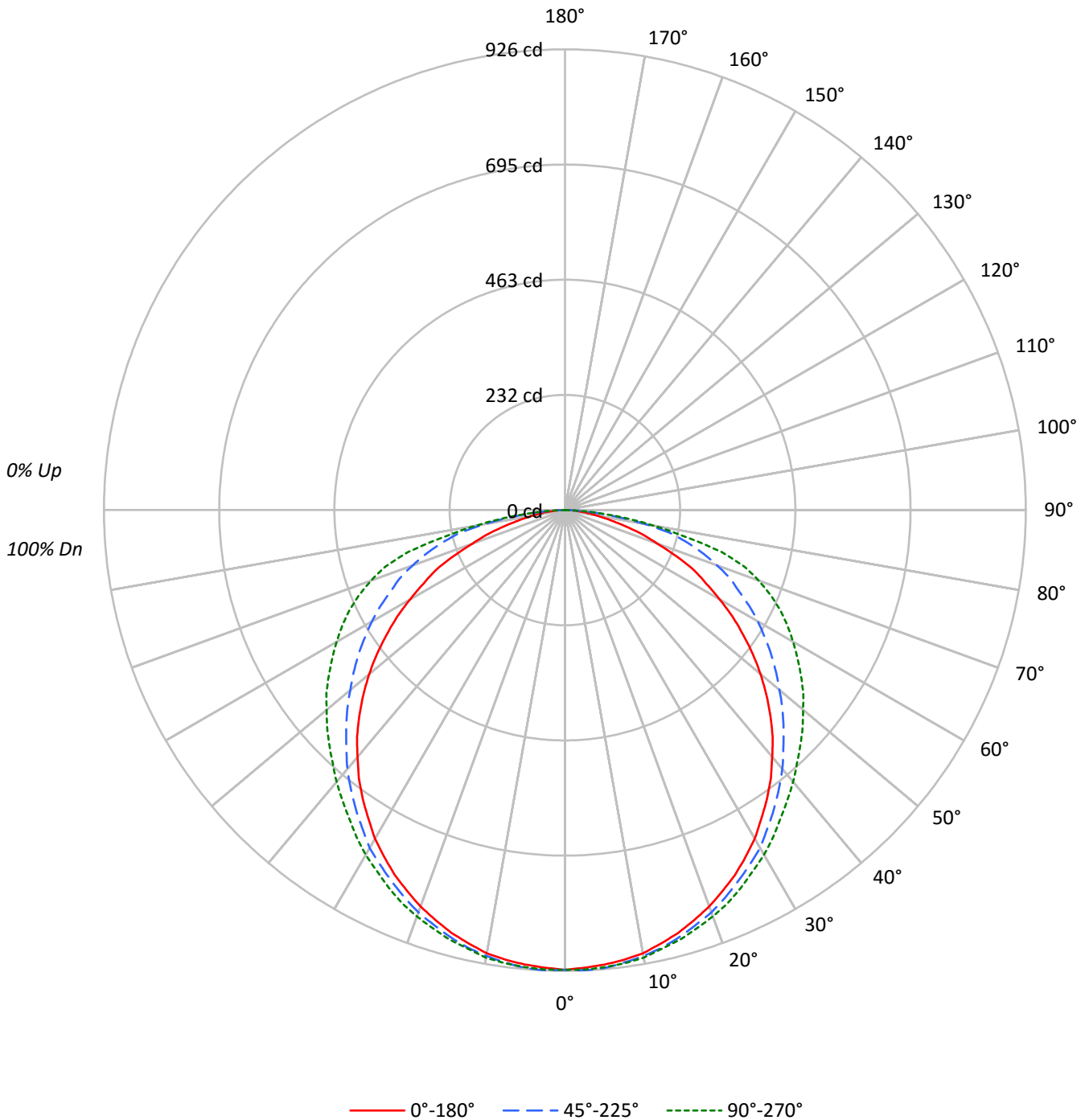
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2486	2486	2486
5°	2477	2496	2491
10°	2472	2486	2496
15°	2451	2476	2490
20°	2428	2464	2489
25°	2402	2444	2486
30°	2371	2436	2486
35°	2326	2407	2483
40°	2276	2388	2506
45°	2223	2364	2546
50°	2149	2357	2616
55°	2051	2375	2715
60°	1934	2410	2849
65°	1826	2457	3043
70°	1559	2563	3259
75°	1307	2669	3386
80°	1069	2579	2825
85°	929	1914	2078



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.6	3.1
10°-20°	250.5	8.9
20°-30°	379.6	13.5
30°-40°	458.4	16.3
40°-50°	481.7	17.2
50°-60°	453.2	16.2
60°-70°	377.9	13.5
70°-80°	250.4	8.9
80°-90°	66.7	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°	717.7	25.6
0°-40°	1176.1	41.9
0°-60°	2111.0	75.2
0°-90°	2806.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2806.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	924	924	924	924	924	
5°	917	919	924	924	922	87
15°	880	883	889	892	894	248
25°	809	814	823	834	837	372
35°	708	715	733	749	756	443
45°	584	593	621	653	669	450
55°	437	457	506	558	579	391
65°	287	312	386	450	478	279
75°	126	175	257	310	326	136
85°	30	46	62	67	67	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	924.0	924.0	924.0	924.0	924.0
2.5°	920.4	922.2	925.8	925.8	924.0
5°	916.9	918.7	924.0	924.0	922.2
7.5°	911.6	913.4	916.9	920.4	918.7
10°	904.5	906.3	909.8	913.4	913.4
12.5°	892.1	893.9	901.0	902.7	902.7
15°	879.7	883.3	888.6	892.1	893.9
17.5°	863.8	867.3	874.4	881.5	881.5
20°	847.9	851.4	860.3	867.3	869.1
22.5°	828.4	833.7	842.6	851.4	855.0
25°	808.9	814.2	823.1	833.7	837.3
27.5°	785.9	791.2	803.6	816.0	817.8
30°	762.9	768.2	784.1	794.8	800.1
32.5°	734.6	741.7	757.6	773.5	778.8
35°	708.0	715.1	732.8	748.7	755.8
37.5°	679.7	686.8	706.3	725.7	734.6
40°	647.9	656.7	679.7	701.0	713.3
42.5°	617.8	626.6	649.6	677.9	690.3
45°	584.1	593.0	621.3	653.2	669.1
47.5°	548.7	559.3	593.0	631.9	647.9
50°	513.3	525.7	562.9	607.1	624.8
52.5°	476.2	492.1	534.6	582.4	603.6
55°	437.2	456.7	506.2	557.6	578.8
57.5°	400.0	417.7	476.2	531.0	554.0
60°	359.3	382.3	447.8	504.5	529.3
62.5°	320.4	345.2	417.7	477.9	504.5
65°	286.8	311.5	385.9	449.6	477.9
67.5°	242.5	276.1	359.3	419.5	447.8
70°	198.2	244.3	325.7	387.6	414.2
72.5°	164.6	208.9	292.1	354.0	378.8
75°	125.7	175.2	256.7	309.8	325.7
77.5°	93.8	145.1	219.5	246.0	247.8
80°	69.0	111.5	166.4	175.2	182.3
82.5°	47.8	77.9	108.0	118.6	122.1
85°	30.1	46.0	62.0	67.3	67.3
87.5°	15.9	17.7	21.2	21.2	21.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)