

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: P308268

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-HRP-CP187-W2A-U-3000K**

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: P308268
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-3000K
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: 2434.0 lumens
Efficiency: N/A
Efficacy: 75.6 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

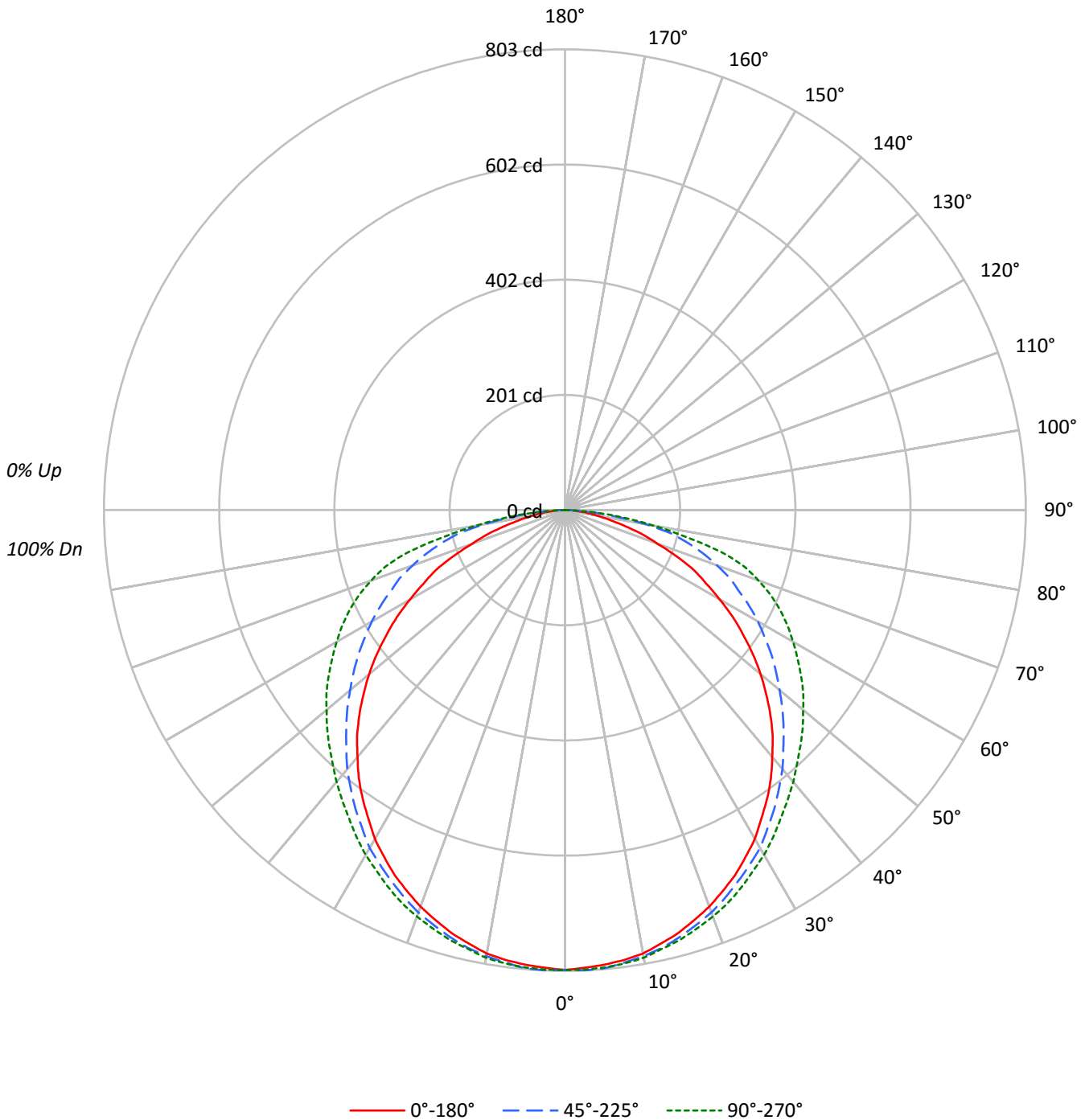
Input Watts (W): 32.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2157	2157	2157
5°	2148	2165	2161
10°	2144	2156	2165
15°	2126	2147	2160
20°	2106	2137	2159
25°	2083	2120	2157
30°	2056	2114	2156
35°	2018	2088	2154
40°	1974	2071	2174
45°	1928	2051	2209
50°	1864	2044	2269
55°	1779	2060	2356
60°	1678	2091	2471
65°	1584	2131	2640
70°	1353	2223	2827
75°	1133	2314	2937
80°	928	2236	2450
85°	806	1658	1800



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.0	3.1
10°-20°	217.3	8.9
20°-30°	329.3	13.5
30°-40°	397.6	16.3
40°-50°	417.8	17.2
50°-60°	393.1	16.2
60°-70°	327.8	13.5
70°-80°	217.2	8.9
80°-90°	57.9	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°	622.6	25.6
0°-40°	1020.2	41.9
0°-60°	1831.1	75.2
0°-90°	2434.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2434.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	802	802	802	802	802	
5°	795	797	802	802	800	76
15°	763	766	771	774	775	215
25°	702	706	714	723	726	323
35°	614	620	636	650	656	384
45°	507	514	539	567	580	390
55°	379	396	439	484	502	339
65°	249	270	335	390	415	242
75°	109	152	223	269	282	118
85°	26	40	54	58	58	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	801.5	801.5	801.5	801.5	801.5
2.5°	798.4	800.0	803.0	803.0	801.5
5°	795.3	796.9	801.5	801.5	800.0
7.5°	790.7	792.3	795.3	798.4	796.9
10°	784.6	786.1	789.2	792.3	792.3
12.5°	773.9	775.4	781.5	783.1	783.1
15°	763.1	766.2	770.8	773.9	775.4
17.5°	749.3	752.4	758.5	764.6	764.6
20°	735.5	738.5	746.2	752.4	753.9
22.5°	718.6	723.2	730.9	738.5	741.6
25°	701.7	706.3	714.0	723.2	726.3
27.5°	681.7	686.3	697.1	707.8	709.4
30°	661.8	666.4	680.2	689.4	694.0
32.5°	637.2	643.3	657.2	671.0	675.6
35°	614.2	620.3	635.7	649.5	655.6
37.5°	589.6	595.7	612.6	629.5	637.2
40°	562.0	569.6	589.6	608.0	618.8
42.5°	535.9	543.5	563.5	588.1	598.8
45°	506.7	514.4	538.9	566.6	580.4
47.5°	476.0	485.2	514.4	548.1	562.0
50°	445.3	456.0	488.3	526.6	542.0
52.5°	413.0	426.8	463.7	505.2	523.6
55°	379.2	396.1	439.1	483.7	502.1
57.5°	347.0	362.4	413.0	460.6	480.6
60°	311.7	331.7	388.5	437.6	459.1
62.5°	277.9	299.4	362.4	414.6	437.6
65°	248.7	270.2	334.7	390.0	414.6
67.5°	210.4	239.5	311.7	363.9	388.5
70°	172.0	211.9	282.5	336.3	359.3
72.5°	142.8	181.2	253.3	307.1	328.6
75°	109.0	152.0	222.6	268.7	282.5
77.5°	81.4	125.9	190.4	213.4	215.0
80°	59.9	96.7	144.3	152.0	158.1
82.5°	41.5	67.6	93.7	102.9	105.9
85°	26.1	39.9	53.7	58.3	58.3
87.5°	13.8	15.4	18.4	18.4	18.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)