

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: P308275

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-HRP-CP187-W2A-U-6500K**

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: P308275
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-6500K
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: 2694.9 lumens
Efficiency: N/A
Efficacy: 79.7 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

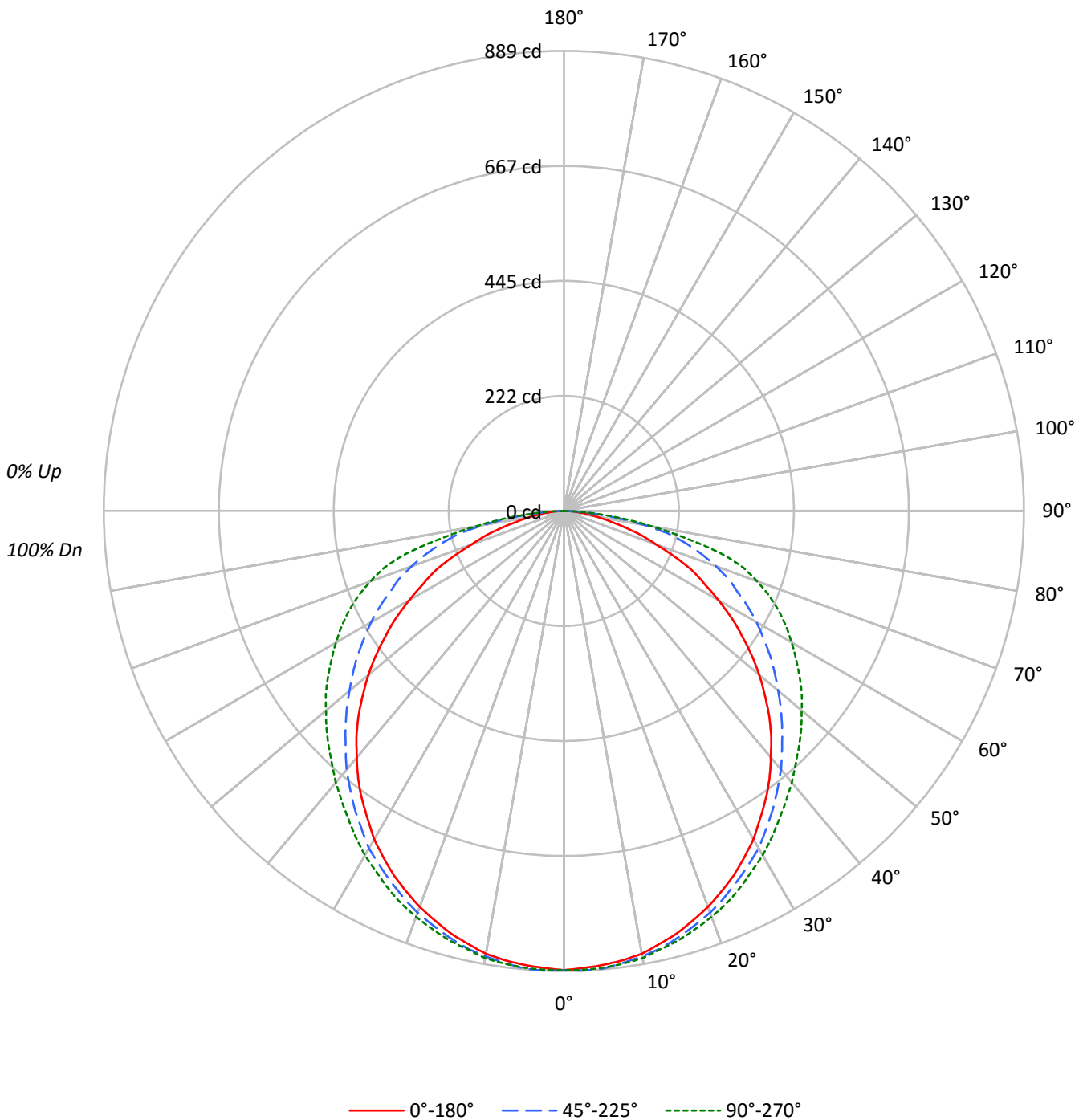
Input Watts (W): 33.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2388	2388	2388
5°	2379	2397	2393
10°	2374	2388	2397
15°	2354	2377	2392
20°	2332	2366	2390
25°	2307	2347	2388
30°	2277	2340	2388
35°	2234	2312	2385
40°	2186	2293	2407
45°	2135	2271	2445
50°	2064	2263	2512
55°	1970	2281	2608
60°	1857	2315	2736
65°	1754	2360	2923
70°	1498	2461	3130
75°	1255	2563	3252
80°	1027	2476	2713
85°	892	1837	1995



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.1	3.1
10°-20°	240.6	8.9
20°-30°	364.6	13.5
30°-40°	440.3	16.3
40°-50°	462.6	17.2
50°-60°	435.3	16.2
60°-70°	362.9	13.5
70°-80°	240.5	8.9
80°-90°	64.1	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°	689.3	25.6
0°-40°	1129.5	41.9
0°-60°	2027.4	75.2
0°-90°	2694.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2694.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	887	887	887	887	887	
5°	881	882	887	887	886	84
15°	845	848	853	857	858	238
25°	777	782	790	801	804	358
35°	680	687	704	719	726	425
45°	561	570	597	627	643	432
55°	420	439	486	536	556	376
65°	275	299	371	432	459	268
75°	121	168	246	298	313	131
85°	29	44	60	65	65	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	887.4	887.4	887.4	887.4	887.4
2.5°	884.0	885.7	889.1	889.1	887.4
5°	880.6	882.3	887.4	887.4	885.7
7.5°	875.5	877.2	880.6	884.0	882.3
10°	868.7	870.4	873.8	877.2	877.2
12.5°	856.8	858.5	865.3	867.0	867.0
15°	844.9	848.3	853.4	856.8	858.5
17.5°	829.6	833.0	839.8	846.6	846.6
20°	814.3	817.7	826.2	833.0	834.7
22.5°	795.6	800.7	809.2	817.7	821.1
25°	776.9	782.0	790.5	800.7	804.1
27.5°	754.8	759.9	771.8	783.7	785.4
30°	732.7	737.8	753.1	763.3	768.4
32.5°	705.5	712.3	727.6	742.9	748.0
35°	680.0	686.8	703.8	719.1	725.9
37.5°	652.8	659.6	678.3	697.0	705.5
40°	622.2	630.7	652.8	673.2	685.1
42.5°	593.3	601.8	623.9	651.1	663.0
45°	561.0	569.5	596.7	627.3	642.6
47.5°	527.0	537.2	569.5	606.9	622.2
50°	493.0	504.9	540.6	583.1	600.1
52.5°	457.3	472.6	513.4	559.3	579.7
55°	419.9	438.6	486.2	535.5	555.9
57.5°	384.2	401.2	457.3	510.0	532.1
60°	345.1	367.2	430.1	484.5	508.3
62.5°	307.7	331.5	401.2	459.0	484.5
65°	275.4	299.2	370.6	431.8	459.0
67.5°	232.9	265.2	345.1	402.9	430.1
70°	190.4	234.6	312.8	372.3	397.8
72.5°	158.1	200.6	280.5	340.0	363.8
75°	120.7	168.3	246.5	297.5	312.8
77.5°	90.1	139.4	210.8	236.3	238.0
80°	66.3	107.1	159.8	168.3	175.1
82.5°	45.9	74.8	103.7	113.9	117.3
85°	28.9	44.2	59.5	64.6	64.6
87.5°	15.3	17.0	20.4	20.4	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)