

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: P312556

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-HRP-CP187-W2A-U-3500K**

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: P312556
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-3500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3500K 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: 2672.0 lumens
Efficiency: N/A
Efficacy: 82.5 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

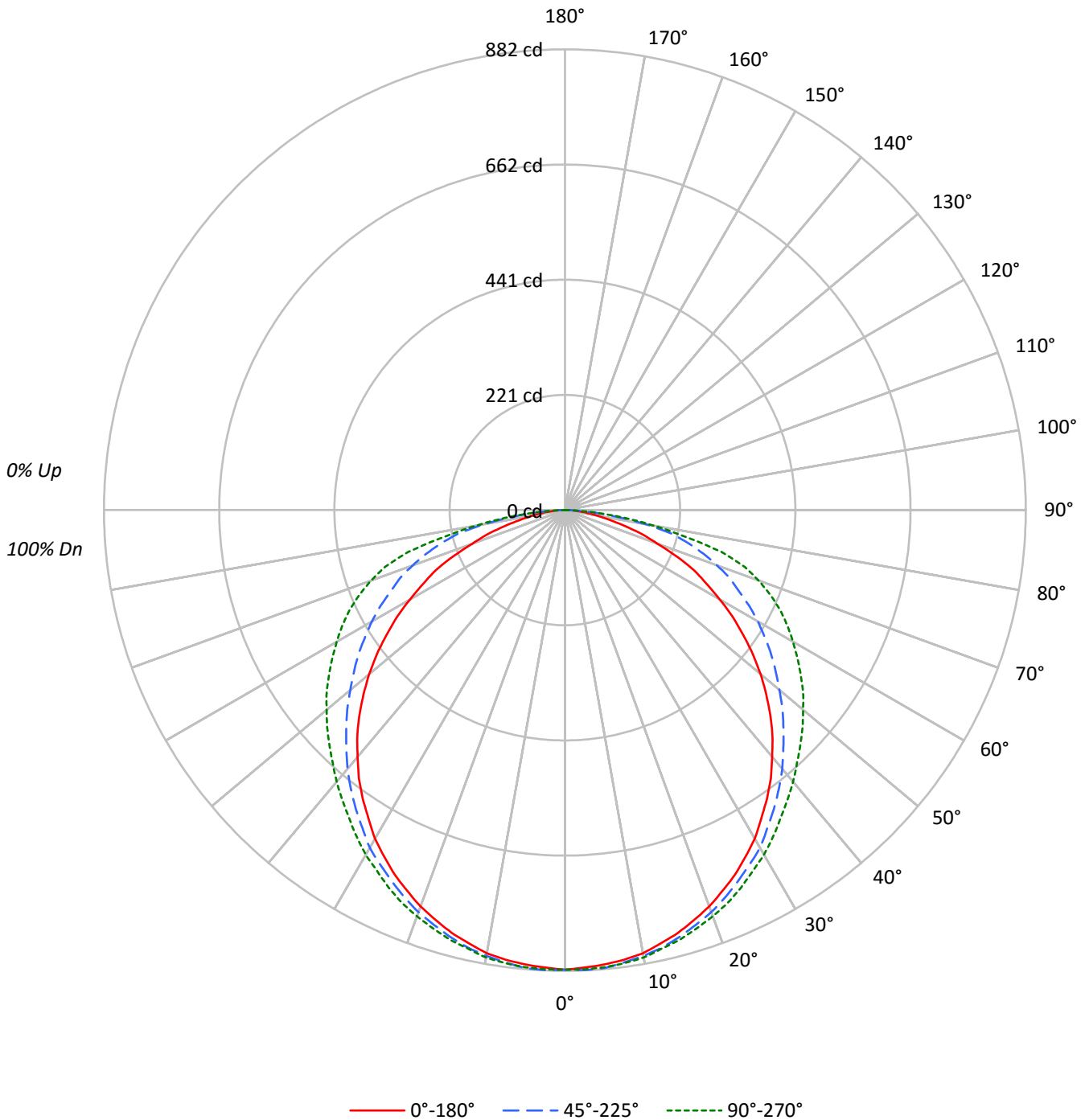
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2368	2368	2368
5°	2358	2377	2372
10°	2353	2367	2376
15°	2334	2357	2371
20°	2312	2346	2370
25°	2287	2327	2367
30°	2257	2320	2367
35°	2215	2292	2364
40°	2167	2274	2386
45°	2117	2251	2425
50°	2046	2244	2491
55°	1953	2262	2586
60°	1842	2295	2713
65°	1739	2340	2898
70°	1485	2440	3103
75°	1245	2541	3224
80°	1018	2455	2690
85°	886	1822	1979



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.4	3.1
10°-20°	238.5	8.9
20°-30°	361.5	13.5
30°-40°	436.5	16.3
40°-50°	458.7	17.2
50°-60°	431.6	16.2
60°-70°	359.8	13.5
70°-80°	238.4	8.9
80°-90°	63.5	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°	683.4	25.6
0°-40°	1119.9	41.9
0°-60°	2010.2	75.2
0°-90°	2672.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2672.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	880	880	880	880	880	
5°	873	875	880	880	878	83
15°	838	841	846	850	851	236
25°	770	775	784	794	797	355
35°	674	681	698	713	720	422
45°	556	565	592	622	637	428
55°	416	435	482	531	551	372
65°	273	297	368	428	455	266
75°	120	167	244	295	310	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°	879.9	879.9	879.9	879.9	879.9
2.5°	876.5	878.2	881.5	881.5	879.9
5°	873.1	874.8	879.9	879.9	878.2
7.5°	868.1	869.7	873.1	876.5	874.8
10°	861.3	863.0	866.4	869.7	869.7
12.5°	849.5	851.2	857.9	859.6	859.6
15°	837.7	841.1	846.1	849.5	851.2
17.5°	822.6	825.9	832.7	839.4	839.4
20°	807.4	810.8	819.2	825.9	827.6
22.5°	788.8	793.9	802.3	810.8	814.1
25°	770.3	775.4	783.8	793.9	797.3
27.5°	748.4	753.4	765.2	777.0	778.7
30°	726.5	731.5	746.7	756.8	761.9
32.5°	699.5	706.2	721.4	736.6	741.6
35°	674.2	681.0	697.8	713.0	719.7
37.5°	647.3	654.0	672.5	691.1	699.5
40°	616.9	625.3	647.3	667.5	679.3
42.5°	588.3	596.7	618.6	645.6	657.4
45°	556.2	564.7	591.6	622.0	637.1
47.5°	522.5	532.6	564.7	601.7	616.9
50°	488.8	500.6	536.0	578.1	595.0
52.5°	453.4	468.6	509.0	554.5	574.8
55°	416.3	434.9	482.1	530.9	551.2
57.5°	380.9	397.8	453.4	505.7	527.6
60°	342.2	364.1	426.4	480.4	504.0
62.5°	305.1	328.7	397.8	455.1	480.4
65°	273.1	296.7	367.5	428.1	455.1
67.5°	230.9	262.9	342.2	399.5	426.4
70°	188.8	232.6	310.1	369.1	394.4
72.5°	156.8	198.9	278.1	337.1	360.7
75°	119.7	166.9	244.4	295.0	310.1
77.5°	89.3	138.2	209.0	234.3	236.0
80°	65.7	106.2	158.4	166.9	173.6
82.5°	45.5	74.2	102.8	112.9	116.3
85°	28.7	43.8	59.0	64.1	64.1
87.5°	15.2	16.9	20.2	20.2	20.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)