

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: P308272

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-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: P308272
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-5000K
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: 2655.0 lumens
Efficiency: N/A
Efficacy: 80.0 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

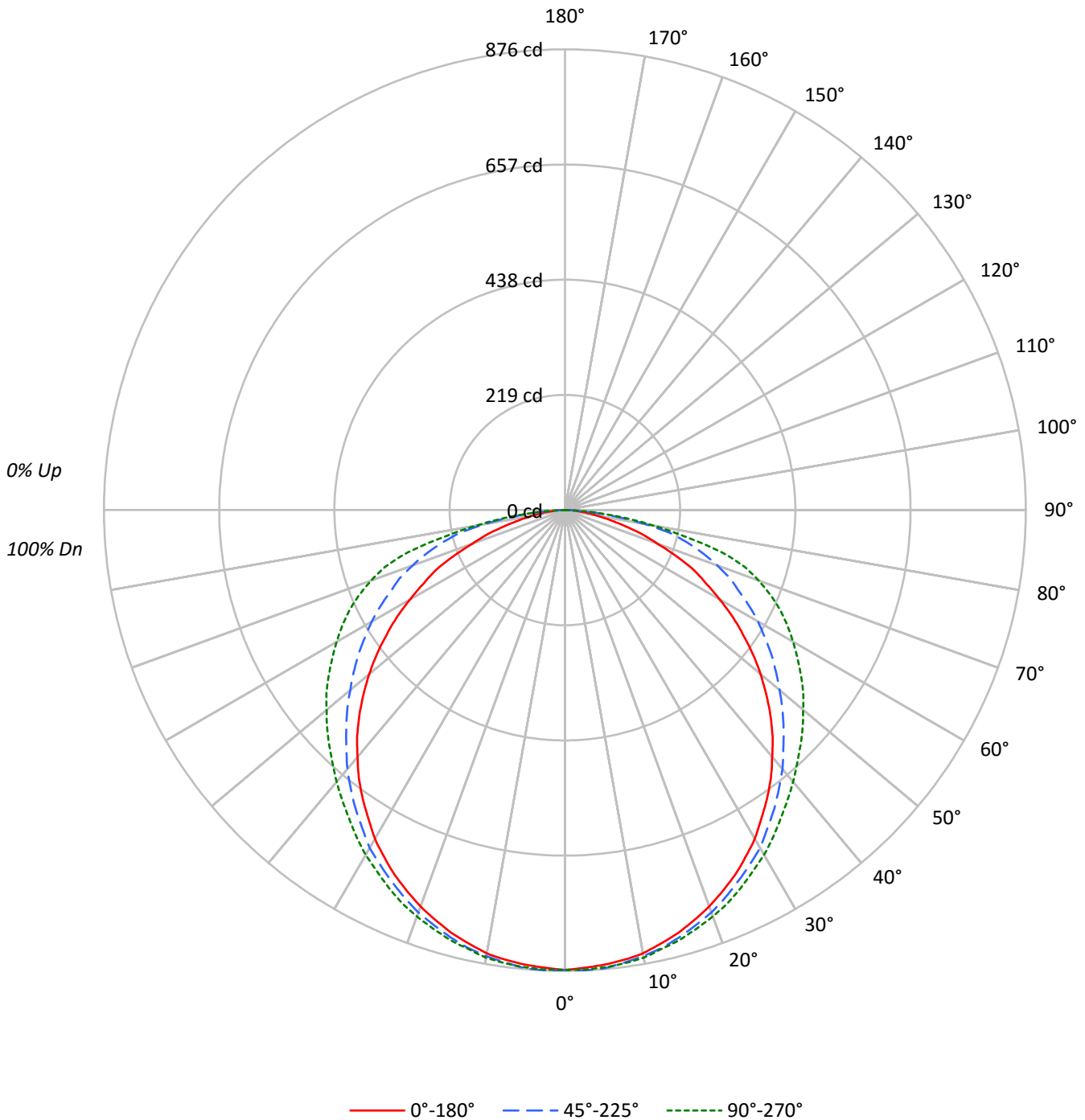
Input Watts (W): 33.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2353	2353	2353
5°	2344	2362	2357
10°	2338	2352	2361
15°	2319	2342	2356
20°	2297	2331	2355
25°	2273	2312	2352
30°	2243	2306	2352
35°	2201	2278	2349
40°	2153	2259	2371
45°	2103	2237	2409
50°	2033	2230	2475
55°	1941	2247	2570
60°	1830	2280	2695
65°	1727	2325	2879
70°	1476	2425	3083
75°	1236	2525	3204
80°	1012	2439	2673
85°	880	1809	1964



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.9	3.1
10°-20°	237.0	8.9
20°-30°	359.2	13.5
30°-40°	433.7	16.3
40°-50°	455.8	17.2
50°-60°	428.8	16.2
60°-70°	357.6	13.5
70°-80°	236.9	8.9
80°-90°	63.1	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°	679.1	25.6
0°-40°	1112.8	41.9
0°-60°	1997.4	75.2
0°-90°	2655.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2655.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	874	874	874	874	874	
5°	868	869	874	874	873	82
15°	832	836	841	844	846	235
25°	765	770	779	789	792	352
35°	670	677	693	708	715	419
45°	553	561	588	618	633	426
55°	414	432	479	528	548	370
65°	271	295	365	425	452	264
75°	119	166	243	293	308	129
85°	28	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°	874.3	874.3	874.3	874.3	874.3
2.5°	870.9	872.6	875.9	875.9	874.3
5°	867.6	869.2	874.3	874.3	872.6
7.5°	862.5	864.2	867.6	870.9	869.2
10°	855.8	857.5	860.9	864.2	864.2
12.5°	844.1	845.8	852.5	854.2	854.2
15°	832.4	835.7	840.8	844.1	845.8
17.5°	817.3	820.7	827.4	834.1	834.1
20°	802.2	805.6	814.0	820.7	822.3
22.5°	783.8	788.8	797.2	805.6	808.9
25°	765.4	770.4	778.8	788.8	792.2
27.5°	743.6	748.6	760.4	772.1	773.8
30°	721.9	726.9	742.0	752.0	757.0
32.5°	695.1	701.8	716.8	731.9	736.9
35°	669.9	676.6	693.4	708.5	715.2
37.5°	643.1	649.8	668.3	686.7	695.1
40°	613.0	621.4	643.1	663.2	675.0
42.5°	584.5	592.9	614.7	641.5	653.2
45°	552.7	561.1	587.9	618.0	633.1
47.5°	519.2	529.2	561.1	597.9	613.0
50°	485.7	497.4	532.6	574.5	591.2
52.5°	450.5	465.6	505.8	551.0	571.1
55°	413.7	432.1	479.0	527.6	547.7
57.5°	378.5	395.3	450.5	502.4	524.2
60°	340.0	361.8	423.7	477.3	500.8
62.5°	303.1	326.6	395.3	452.2	477.3
65°	271.3	294.8	365.1	425.4	452.2
67.5°	229.5	261.3	340.0	396.9	423.7
70°	187.6	231.1	308.2	366.8	391.9
72.5°	155.8	197.6	276.3	335.0	358.4
75°	118.9	165.8	242.9	293.1	308.2
77.5°	88.8	137.3	207.7	232.8	234.5
80°	65.3	105.5	157.4	165.8	172.5
82.5°	45.2	73.7	102.2	112.2	115.6
85°	28.5	43.5	58.6	63.6	63.6
87.5°	15.1	16.7	20.1	20.1	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)