

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: P308271

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-HRP-CP187-W2A-U-4500K**

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: P308271
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-4500K
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: 2619.0 lumens
Efficiency: N/A
Efficacy: 79.4 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

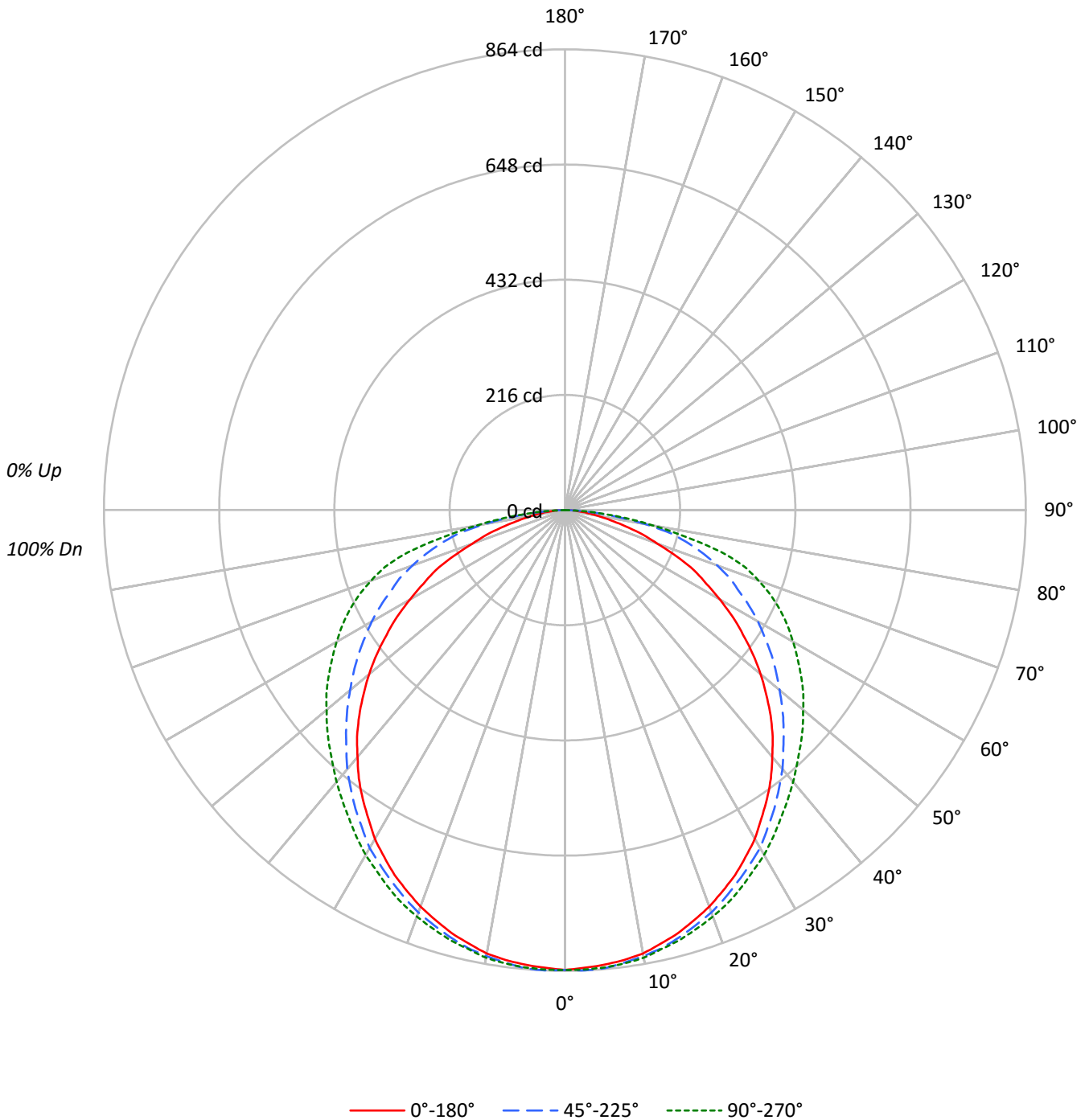
Input Watts (W): 33
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2321	2321	2321
5°	2312	2330	2325
10°	2307	2320	2329
15°	2288	2311	2324
20°	2266	2299	2323
25°	2242	2281	2320
30°	2213	2274	2321
35°	2171	2247	2318
40°	2124	2229	2339
45°	2075	2207	2377
50°	2006	2200	2442
55°	1915	2217	2534
60°	1805	2250	2659
65°	1704	2294	2840
70°	1456	2392	3042
75°	1220	2491	3161
80°	998	2407	2638
85°	868	1785	1939



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	3.1
10°-20°	233.8	8.9
20°-30°	354.3	13.5
30°-40°	427.9	16.3
40°-50°	449.6	17.2
50°-60°	423.0	16.2
60°-70°	352.7	13.5
70°-80°	233.7	8.9
80°-90°	62.3	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°	669.9	25.6
0°-40°	1097.7	41.9
0°-60°	1970.3	75.2
0°-90°	2619.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2619.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	856	858	862	862	861	81
15°	821	824	829	833	834	232
25°	755	760	768	778	782	348
35°	661	668	684	699	706	413
45°	545	554	580	610	624	420
55°	408	426	472	520	540	365
65°	268	291	360	420	446	260
75°	117	164	240	289	304	127
85°	28	43	58	63	63	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	862.4	862.4	862.4	862.4	862.4
2.5°	859.1	860.8	864.1	864.1	862.4
5°	855.8	857.5	862.4	862.4	860.8
7.5°	850.8	852.5	855.8	859.1	857.5
10°	844.2	845.9	849.2	852.5	852.5
12.5°	832.7	834.3	840.9	842.6	842.6
15°	821.1	824.4	829.4	832.7	834.3
17.5°	806.2	809.5	816.1	822.8	822.8
20°	791.4	794.7	802.9	809.5	811.2
22.5°	773.2	778.1	786.4	794.7	798.0
25°	755.0	760.0	768.2	778.1	781.5
27.5°	733.5	738.5	750.1	761.6	763.3
30°	712.1	717.0	731.9	741.8	746.8
32.5°	685.6	692.2	707.1	722.0	726.9
35°	660.8	667.5	684.0	698.8	705.5
37.5°	634.4	641.0	659.2	677.4	685.6
40°	604.7	612.9	634.4	654.2	665.8
42.5°	576.6	584.9	606.3	632.8	644.3
45°	545.2	553.5	579.9	609.6	624.5
47.5°	512.2	522.1	553.5	589.8	604.7
50°	479.1	490.7	525.4	566.7	583.2
52.5°	444.4	459.3	498.9	543.5	563.4
55°	408.1	426.2	472.5	520.4	540.2
57.5°	373.4	389.9	444.4	495.6	517.1
60°	335.4	356.9	418.0	470.9	494.0
62.5°	299.0	322.2	389.9	446.1	470.9
65°	267.6	290.8	360.2	419.6	446.1
67.5°	226.3	257.7	335.4	391.6	418.0
70°	185.0	228.0	304.0	361.8	386.6
72.5°	153.6	195.0	272.6	330.4	353.6
75°	117.3	163.6	239.6	289.1	304.0
77.5°	87.6	135.5	204.9	229.6	231.3
80°	64.4	104.1	155.3	163.6	170.2
82.5°	44.6	72.7	100.8	110.7	114.0
85°	28.1	43.0	57.8	62.8	62.8
87.5°	14.9	16.5	19.8	19.8	19.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)