

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: P308270

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-HRP-CP187-W2A-U-4000K**

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: P308270
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-4000K
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: 2574.0 lumens
Efficiency: N/A
Efficacy: 78.5 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

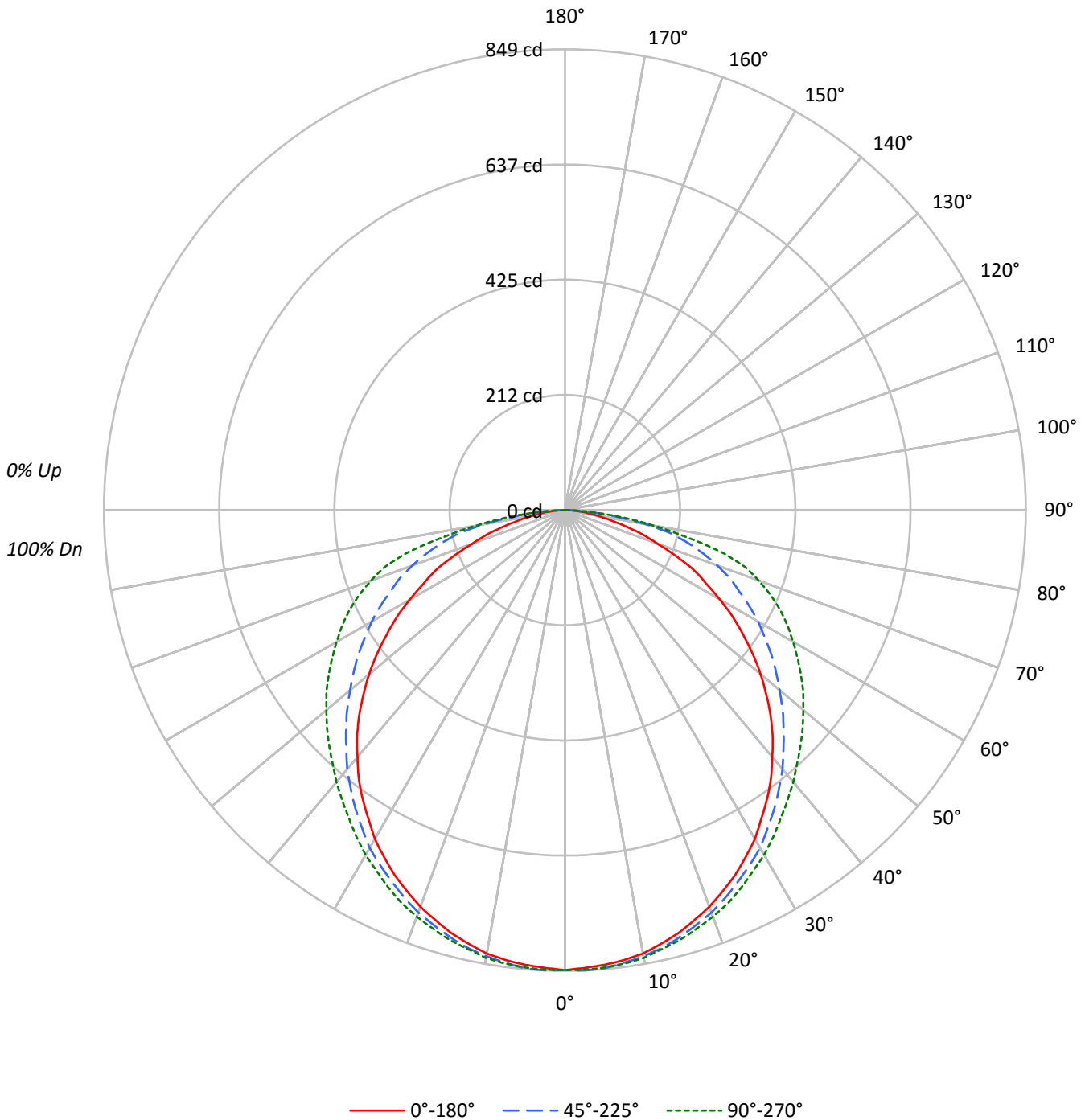
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2281	2281	2281
5°	2272	2290	2285
10°	2267	2281	2289
15°	2248	2271	2284
20°	2227	2260	2283
25°	2203	2242	2280
30°	2174	2235	2280
35°	2134	2208	2278
40°	2088	2190	2299
45°	2039	2169	2336
50°	1971	2161	2400
55°	1882	2179	2491
60°	1774	2211	2613
65°	1675	2254	2791
70°	1431	2351	2990
75°	1199	2447	3107
80°	981	2365	2591
85°	852	1754	1905



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.3	3.1
10°-20°	229.8	8.9
20°-30°	348.2	13.5
30°-40°	420.5	16.3
40°-50°	441.9	17.2
50°-60°	415.7	16.2
60°-70°	346.6	13.5
70°-80°	229.7	8.9
80°-90°	61.2	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°	658.4	25.6
0°-40°	1078.9	41.9
0°-60°	1936.5	75.2
0°-90°	2574.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2574.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	848	848	848	848	848	
5°	841	843	848	848	846	80
15°	807	810	815	818	820	228
25°	742	747	755	765	768	342
35°	650	656	672	687	693	406
45°	536	544	570	599	614	413
55°	401	419	464	512	531	359
65°	263	286	354	412	438	256
75°	115	161	235	284	299	125
85°	28	42	57	62	62	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	847.6	847.6	847.6	847.6	847.6
2.5°	844.3	846.0	849.2	849.2	847.6
5°	841.1	842.7	847.6	847.6	846.0
7.5°	836.2	837.8	841.1	844.3	842.7
10°	829.7	831.4	834.6	837.8	837.8
12.5°	818.4	820.0	826.5	828.1	828.1
15°	807.0	810.2	815.1	818.4	820.0
17.5°	792.4	795.6	802.1	808.6	808.6
20°	777.8	781.0	789.1	795.6	797.3
22.5°	759.9	764.8	772.9	781.0	784.3
25°	742.0	746.9	755.0	764.8	768.0
27.5°	720.9	725.8	737.2	748.5	750.2
30°	699.8	704.7	719.3	729.1	733.9
32.5°	673.8	680.3	695.0	709.6	714.4
35°	649.5	656.0	672.2	686.8	693.3
37.5°	623.5	630.0	647.9	665.7	673.8
40°	594.3	602.4	623.5	643.0	654.4
42.5°	566.7	574.8	595.9	621.9	633.3
45°	535.8	544.0	569.9	599.2	613.8
47.5°	503.4	513.1	544.0	579.7	594.3
50°	470.9	482.2	516.3	556.9	573.2
52.5°	436.8	451.4	490.4	534.2	553.7
55°	401.1	418.9	464.4	511.5	531.0
57.5°	367.0	383.2	436.8	487.1	508.2
60°	329.6	350.7	410.8	462.8	485.5
62.5°	293.9	316.6	383.2	438.4	462.8
65°	263.0	285.8	354.0	412.4	438.4
67.5°	222.5	253.3	329.6	384.8	410.8
70°	181.9	224.1	298.8	355.6	380.0
72.5°	151.0	191.6	267.9	324.7	347.5
75°	115.3	160.7	235.4	284.2	298.8
77.5°	86.1	133.1	201.3	225.7	227.3
80°	63.3	102.3	152.6	160.7	167.2
82.5°	43.8	71.4	99.0	108.8	112.0
85°	27.6	42.2	56.8	61.7	61.7
87.5°	14.6	16.2	19.5	19.5	19.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)