

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: P308267

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-HRP-CP187-W2A-U-2700K**

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: P308267
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-2700K
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: 2366.0 lumens
Efficiency: N/A
Efficacy: 73.0 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

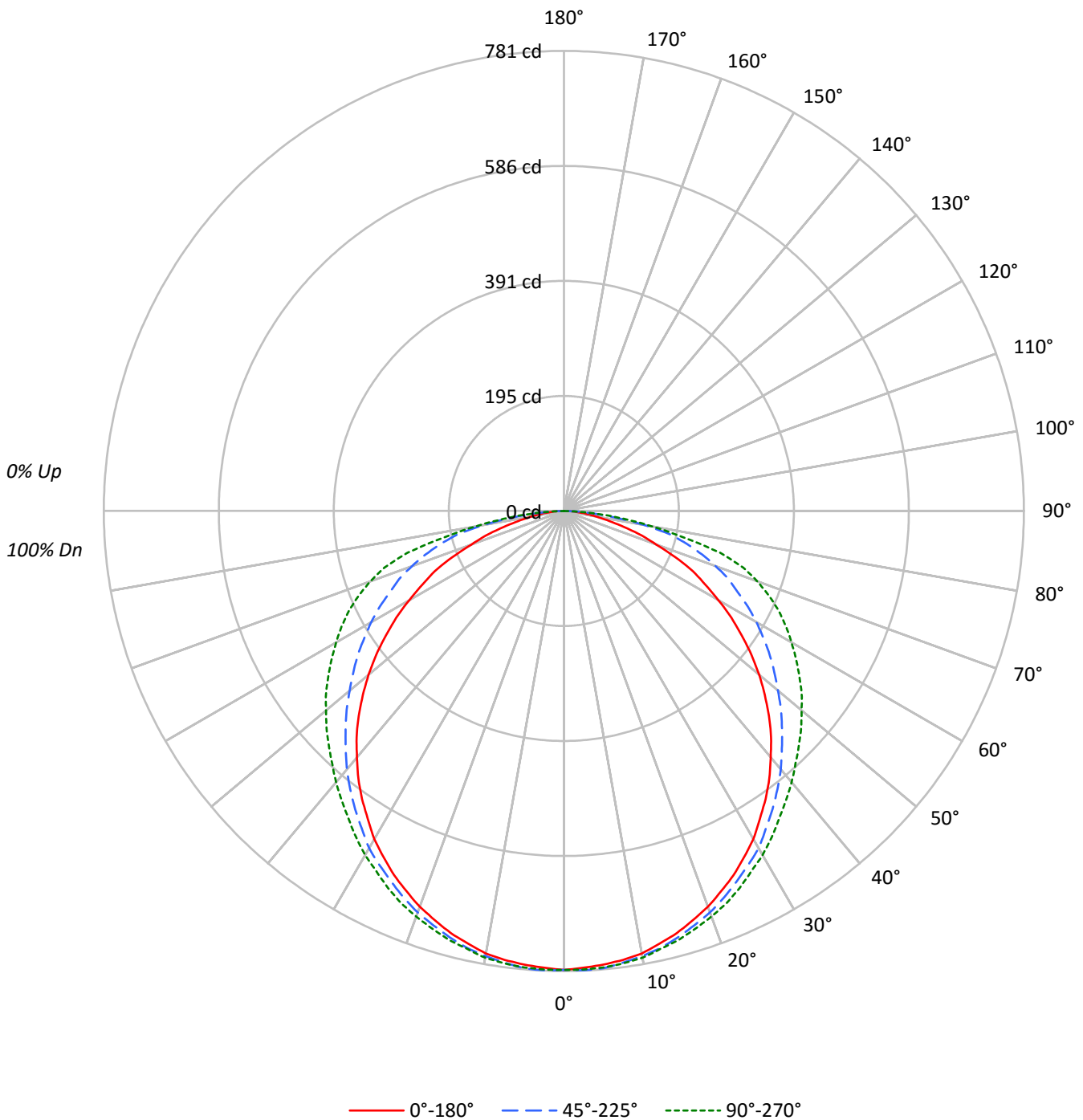
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2097	2097	2097
5°	2088	2105	2100
10°	2084	2096	2104
15°	2067	2087	2100
20°	2047	2077	2099
25°	2025	2061	2096
30°	1999	2055	2096
35°	1961	2030	2094
40°	1919	2013	2113
45°	1874	1994	2147
50°	1812	1987	2206
55°	1730	2003	2290
60°	1631	2032	2402
65°	1540	2072	2566
70°	1316	2161	2748
75°	1102	2250	2855
80°	902	2174	2382
85°	784	1612	1751



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.8	3.1
10°-20°	211.2	8.9
20°-30°	320.1	13.5
30°-40°	386.5	16.3
40°-50°	406.1	17.2
50°-60°	382.1	16.2
60°-70°	318.6	13.5
70°-80°	211.1	8.9
80°-90°	56.3	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°	605.2	25.6
0°-40°	991.7	41.9
0°-60°	1780.0	75.2
0°-90°	2366.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2366.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	779	779	779	779	779	
5°	773	775	779	779	778	73
15°	742	745	749	752	754	209
25°	682	687	694	703	706	314
35°	597	603	618	631	637	373
45°	492	500	524	551	564	379
55°	369	385	427	470	488	330
65°	242	263	325	379	403	235
75°	106	148	216	261	275	115
85°	25	39	52	57	57	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	779.1	779.1	779.1	779.1	779.1
2.5°	776.1	777.6	780.6	780.6	779.1
5°	773.1	774.6	779.1	779.1	777.6
7.5°	768.6	770.1	773.1	776.1	774.6
10°	762.7	764.2	767.2	770.1	770.1
12.5°	752.2	753.7	759.7	761.2	761.2
15°	741.8	744.8	749.2	752.2	753.7
17.5°	728.4	731.3	737.3	743.3	743.3
20°	714.9	717.9	725.4	731.3	732.8
22.5°	698.5	703.0	710.4	717.9	720.9
25°	682.1	686.6	694.0	703.0	706.0
27.5°	662.7	667.2	677.6	688.1	689.5
30°	643.3	647.8	661.2	670.1	674.6
32.5°	619.4	625.4	638.8	652.2	656.7
35°	597.0	603.0	617.9	631.3	637.3
37.5°	573.1	579.1	595.5	611.9	619.4
40°	546.3	553.7	573.1	591.0	601.5
42.5°	520.9	528.4	547.8	571.6	582.1
45°	492.5	500.0	523.9	550.7	564.2
47.5°	462.7	471.6	500.0	532.8	546.3
50°	432.8	443.3	474.6	511.9	526.9
52.5°	401.5	414.9	450.7	491.0	509.0
55°	368.7	385.1	426.9	470.1	488.1
57.5°	337.3	352.2	401.5	447.8	467.2
60°	303.0	322.4	377.6	425.4	446.3
62.5°	270.1	291.0	352.2	403.0	425.4
65°	241.8	262.7	325.4	379.1	403.0
67.5°	204.5	232.8	303.0	353.7	377.6
70°	167.2	206.0	274.6	326.9	349.3
72.5°	138.8	176.1	246.3	298.5	319.4
75°	106.0	147.8	216.4	261.2	274.6
77.5°	79.1	122.4	185.1	207.5	209.0
80°	58.2	94.0	140.3	147.8	153.7
82.5°	40.3	65.7	91.0	100.0	103.0
85°	25.4	38.8	52.2	56.7	56.7
87.5°	13.4	14.9	17.9	17.9	17.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)