

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: P308543

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-RDP-CP187-W2A-U-5500K**

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: P308543
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
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-RDP-CP187-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 2310.0 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

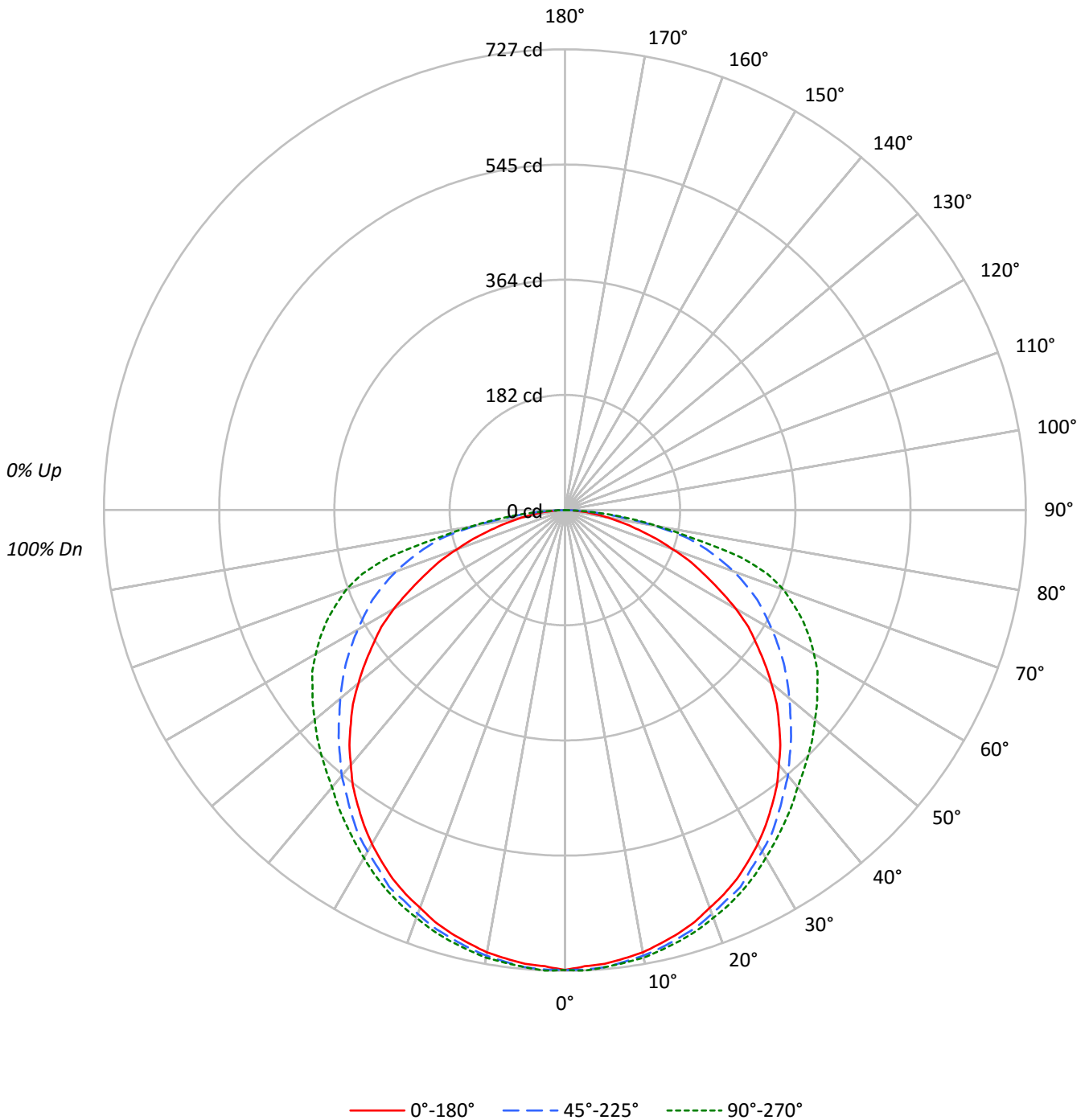
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1953	1953	1953
5°	1942	1955	1955
10°	1936	1950	1959
15°	1927	1946	1960
20°	1912	1942	1961
25°	1907	1947	1968
30°	1890	1933	1969
35°	1870	1926	1982
40°	1845	1922	2006
45°	1817	1921	2069
50°	1778	1935	2156
55°	1730	1977	2280
60°	1674	2030	2442
65°	1558	2132	2640
70°	1430	2233	2888
75°	1255	2350	2986
80°	1080	2238	2343
85°	945	1627	1785



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.6	3.0
10°-20°	197.1	8.5
20°-30°	300.7	13.0
30°-40°	367.1	15.9
40°-50°	392.5	17.0
50°-60°	378.9	16.4
60°-70°	326.2	14.1
70°-80°	220.7	9.6
80°-90°	58.2	2.5
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°	566.4	24.5
0°-40°	933.5	40.4
0°-60°	1704.9	73.8
0°-90°	2310.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2310.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	726	726	726	726	726	
5°	719	720	724	724	724	68
15°	692	693	698	702	704	195
25°	642	646	656	659	663	296
35°	569	574	586	598	603	356
45°	478	486	505	530	544	369
55°	369	381	421	464	486	330
65°	245	268	335	387	415	243
75°	121	160	226	272	287	129
85°	31	42	53	54	58	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	725.6	725.6	725.6	725.6	725.6
2.5°	720.5	722.2	725.6	725.6	727.3
5°	718.8	720.5	723.9	723.9	723.9
7.5°	713.7	715.4	718.8	720.5	720.5
10°	708.6	710.3	713.7	715.4	717.1
12.5°	700.1	701.8	706.9	710.3	710.3
15°	691.6	693.3	698.4	701.8	703.5
17.5°	681.4	684.8	689.9	693.3	695.0
20°	667.8	671.2	678.0	683.1	684.8
22.5°	655.9	659.3	666.1	671.2	674.6
25°	642.3	645.7	655.9	659.3	662.7
27.5°	625.4	628.7	637.2	644.0	649.1
30°	608.4	611.8	622.0	630.4	633.8
32.5°	589.7	594.8	606.7	613.5	618.6
35°	569.3	574.4	586.3	598.2	603.3
37.5°	548.9	554.0	565.9	581.2	588.0
40°	525.1	531.9	547.2	567.6	571.0
42.5°	503.0	511.5	525.1	548.9	557.4
45°	477.5	486.0	504.7	530.2	543.8
47.5°	453.7	462.2	482.6	513.2	530.2
50°	424.8	436.7	462.2	497.9	514.9
52.5°	397.6	407.8	441.8	480.9	501.3
55°	368.8	380.6	421.4	463.9	486.0
57.5°	343.3	353.5	399.3	446.9	472.4
60°	311.0	324.6	377.2	428.2	453.7
62.5°	277.0	297.4	355.2	407.8	435.0
65°	244.7	268.5	334.8	387.4	414.6
67.5°	215.8	241.3	309.3	365.4	390.8
70°	181.8	214.1	283.8	338.2	367.1
72.5°	151.2	186.9	254.9	309.3	334.8
75°	120.7	159.7	226.0	271.9	287.2
77.5°	93.5	130.8	193.7	207.3	209.0
80°	69.7	103.7	144.4	146.1	151.2
82.5°	47.6	73.1	93.5	102.0	103.7
85°	30.6	42.5	52.7	54.4	57.8
87.5°	13.6	15.3	18.7	17.0	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)