

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: P308541

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-RDP-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: P308541
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-4500K
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: 2256.0 lumens
Efficiency: N/A
Efficacy: 68.4 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

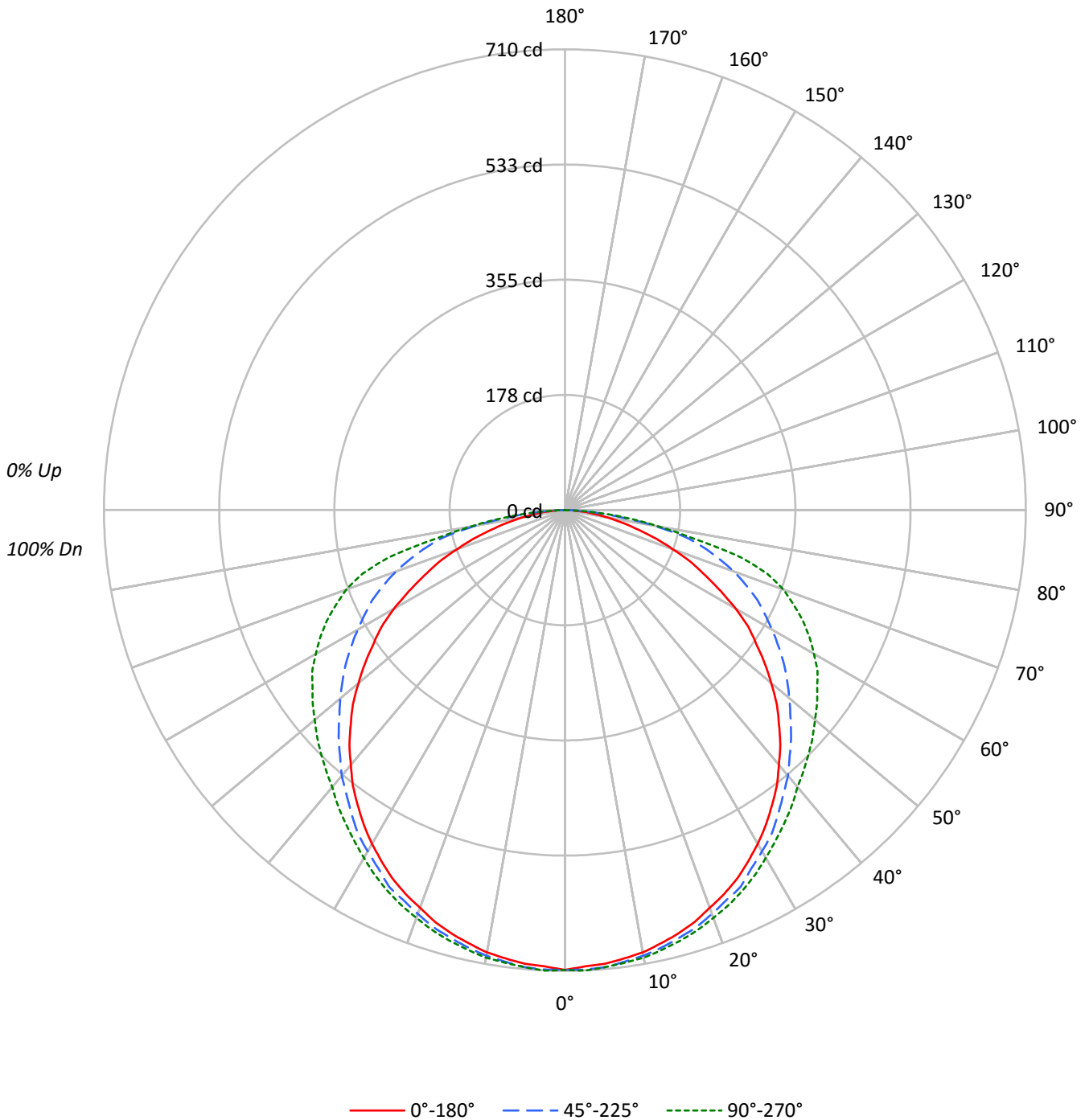
Input Watts (W): 33
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1907	1907	1907
5°	1896	1910	1910
10°	1891	1905	1914
15°	1882	1900	1914
20°	1868	1896	1915
25°	1863	1902	1922
30°	1846	1887	1923
35°	1827	1881	1936
40°	1801	1877	1959
45°	1775	1876	2021
50°	1737	1890	2105
55°	1689	1931	2227
60°	1635	1983	2385
65°	1522	2082	2578
70°	1397	2181	2821
75°	1225	2295	2916
80°	1054	2187	2289
85°	923	1587	1741



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.0	3.0
10°-20°	192.5	8.5
20°-30°	293.6	13.0
30°-40°	358.5	15.9
40°-50°	383.4	17.0
50°-60°	370.0	16.4
60°-70°	318.5	14.1
70°-80°	215.5	9.6
80°-90°	56.9	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°	553.1	24.5
0°-40°	911.7	40.4
0°-60°	1665.1	73.8
0°-90°	2256.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2256.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	709	709	709	709	709	
5°	702	704	707	707	707	67
15°	676	677	682	685	687	191
25°	627	631	641	644	647	289
35°	556	561	573	584	589	348
45°	466	475	493	518	531	360
55°	360	372	412	453	475	323
65°	239	262	327	378	405	238
75°	118	156	221	266	280	126
85°	30	42	51	53	56	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	708.6	708.6	708.6	708.6	708.6
2.5°	703.7	705.3	708.6	708.6	710.3
5°	702.0	703.7	707.0	707.0	707.0
7.5°	697.0	698.7	702.0	703.7	703.7
10°	692.1	693.7	697.0	698.7	700.4
12.5°	683.8	685.4	690.4	693.7	693.7
15°	675.5	677.1	682.1	685.4	687.1
17.5°	665.5	668.8	673.8	677.1	678.8
20°	652.2	655.5	662.2	667.2	668.8
22.5°	640.6	643.9	650.6	655.5	658.9
25°	627.3	630.6	640.6	643.9	647.2
27.5°	610.7	614.1	622.3	629.0	634.0
30°	594.1	597.5	607.4	615.7	619.0
32.5°	575.9	580.9	592.5	599.1	604.1
35°	556.0	560.9	572.6	584.2	589.2
37.5°	536.1	541.0	552.6	567.6	574.2
40°	512.8	519.5	534.4	554.3	557.6
42.5°	491.2	499.5	512.8	536.1	544.3
45°	466.3	474.6	492.9	517.8	531.1
47.5°	443.1	451.4	471.3	501.2	517.8
50°	414.9	426.5	451.4	486.3	502.9
52.5°	388.3	398.3	431.5	469.7	489.6
55°	360.1	371.8	411.6	453.1	474.6
57.5°	335.2	345.2	390.0	436.5	461.4
60°	303.7	317.0	368.4	418.2	443.1
62.5°	270.5	290.4	346.9	398.3	424.9
65°	239.0	262.2	326.9	378.4	404.9
67.5°	210.8	235.7	302.0	356.8	381.7
70°	177.6	209.1	277.2	330.3	358.5
72.5°	147.7	182.6	248.9	302.0	326.9
75°	117.8	156.0	220.7	265.5	280.5
77.5°	91.3	127.8	189.2	202.5	204.1
80°	68.0	101.2	141.1	142.7	147.7
82.5°	46.5	71.4	91.3	99.6	101.2
85°	29.9	41.5	51.4	53.1	56.4
87.5°	13.3	14.9	18.3	16.6	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)