

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: P308182

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CP187-W2A-U-5000K**

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: P308182  
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: 22FCZ2-29HE-UNV-L82765-HRP-CP187-W2A-U-5000K  
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: 1922.0 lumens  
Efficiency: N/A  
Efficacy: 83.9 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

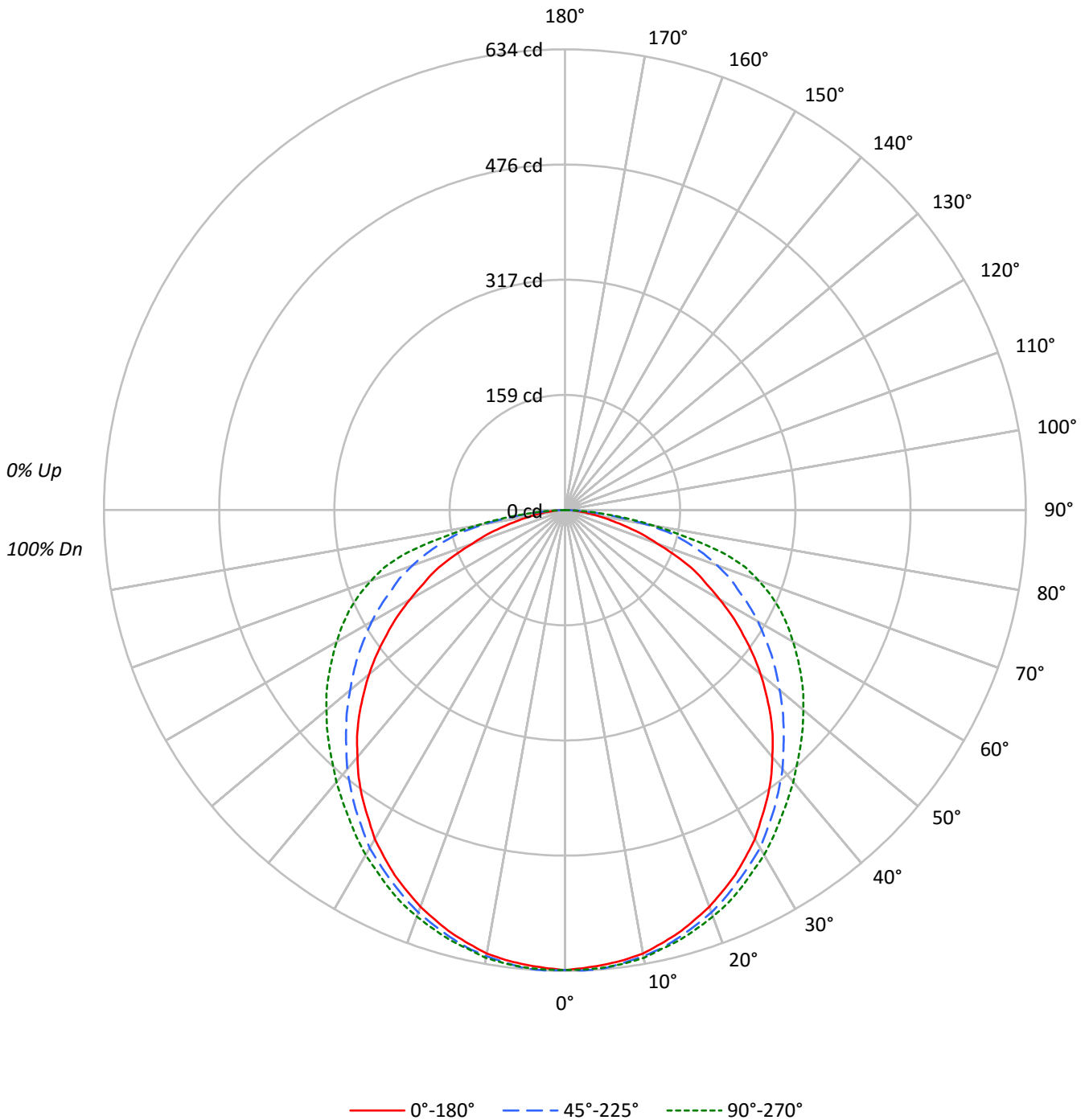
Input Watts (W): 22.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1703	1703	1703
5°	1696	1710	1706
10°	1693	1703	1709
15°	1679	1696	1706
20°	1663	1687	1705
25°	1645	1674	1703
30°	1624	1669	1703
35°	1593	1649	1701
40°	1559	1636	1716
45°	1523	1620	1744
50°	1472	1614	1792
55°	1405	1627	1860
60°	1324	1651	1951
65°	1251	1683	2085
70°	1068	1755	2232
75°	895	1828	2320
80°	733	1767	1936
85°	636	1309	1423



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.0	3.1
10°-20°	171.6	8.9
20°-30°	260.0	13.5
30°-40°	314.0	16.3
40°-50°	329.9	17.2
50°-60°	310.4	16.2
60°-70°	258.8	13.5
70°-80°	171.5	8.9
80°-90°	45.7	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°	491.6	25.6
0°-40°	805.6	41.9
0°-60°	1446.0	75.2
0°-90°	1922.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1922.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	628	629	633	633	632	60
15°	603	605	609	611	612	170
25°	554	558	564	571	574	255
35°	485	490	502	513	518	303
45°	400	406	426	447	458	308
55°	300	313	347	382	396	268
65°	196	213	264	308	327	191
75°	86	120	176	212	223	93
85°	21	32	42	46	46	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	632.9	632.9	632.9	632.9	632.9
2.5°	630.5	631.7	634.1	634.1	632.9
5°	628.0	629.3	632.9	632.9	631.7
7.5°	624.4	625.6	628.0	630.5	629.3
10°	619.6	620.8	623.2	625.6	625.6
12.5°	611.1	612.3	617.1	618.3	618.3
15°	602.6	605.0	608.6	611.1	612.3
17.5°	591.7	594.1	598.9	603.8	603.8
20°	580.8	583.2	589.2	594.1	595.3
22.5°	567.4	571.1	577.1	583.2	585.6
25°	554.1	557.7	563.8	571.1	573.5
27.5°	538.3	542.0	550.4	558.9	560.1
30°	522.6	526.2	537.1	544.4	548.0
32.5°	503.2	508.0	518.9	529.8	533.5
35°	485.0	489.8	501.9	512.9	517.7
37.5°	465.6	470.4	483.8	497.1	503.2
40°	443.8	449.8	465.6	480.1	488.6
42.5°	423.1	429.2	445.0	464.4	472.9
45°	400.1	406.2	425.6	447.4	458.3
47.5°	375.9	383.1	406.2	432.8	443.8
50°	351.6	360.1	385.6	415.9	428.0
52.5°	326.1	337.1	366.2	398.9	413.4
55°	299.5	312.8	346.8	381.9	396.5
57.5°	274.0	286.1	326.1	363.7	379.5
60°	246.1	261.9	306.7	345.5	362.5
62.5°	219.5	236.4	286.1	327.4	345.5
65°	196.4	213.4	264.3	308.0	327.4
67.5°	166.1	189.1	246.1	287.3	306.7
70°	135.8	167.3	223.1	265.5	283.7
72.5°	112.8	143.1	200.1	242.5	259.5
75°	86.1	120.0	175.8	212.2	223.1
77.5°	64.3	99.4	150.3	168.5	169.7
80°	47.3	76.4	114.0	120.0	124.9
82.5°	32.7	53.3	74.0	81.2	83.7
85°	20.6	31.5	42.4	46.1	46.1
87.5°	10.9	12.1	14.5	14.5	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)