

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: P312511

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-HRP-CP250-W2A-U-3500K**

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: P312511  
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-L83050-HRP-CP250-W2A-U-3500K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"  
POLYCARB SHEET  
Light Source: (168) 3500K 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**

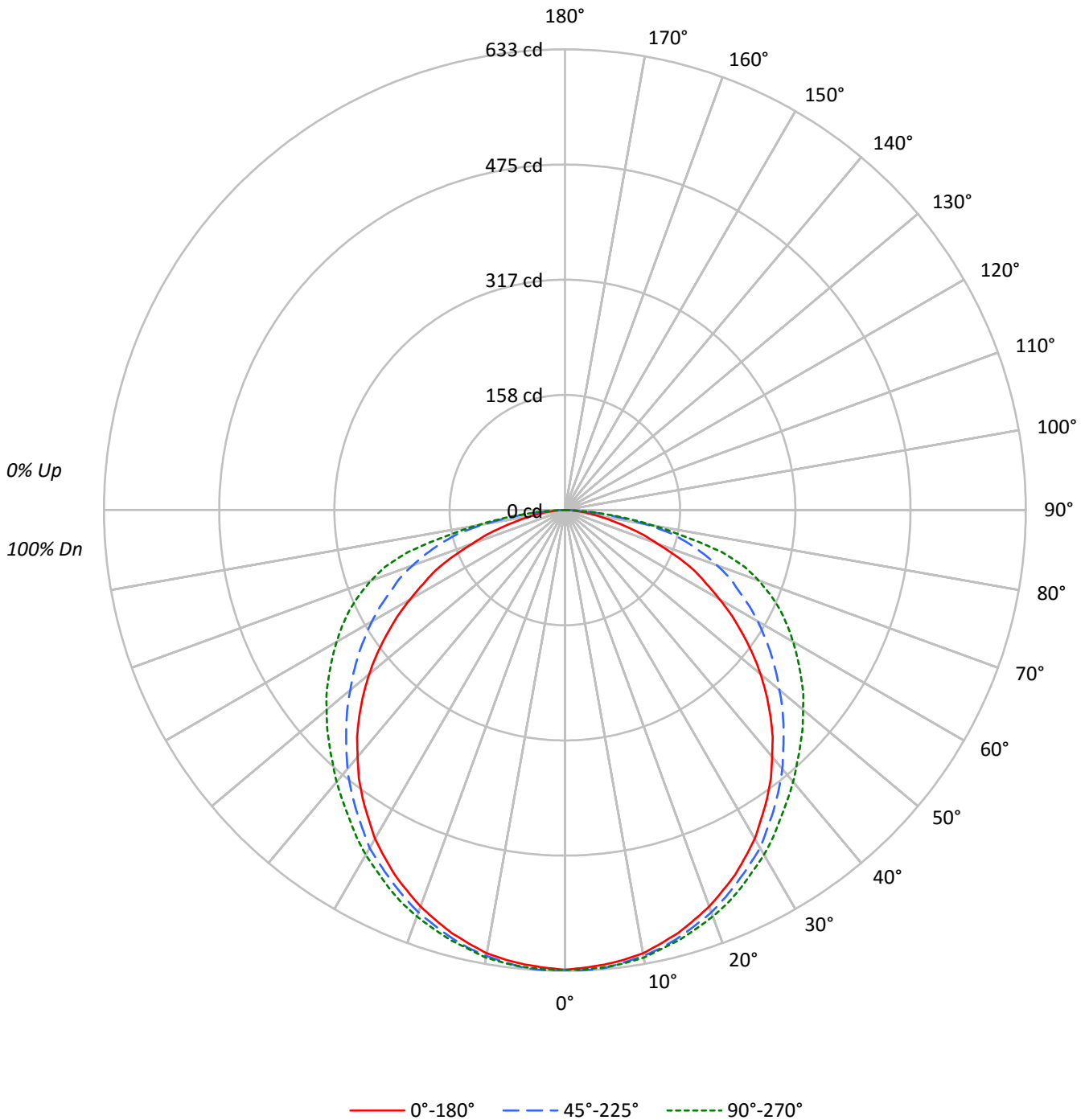
Lumens per Lamp: N/A  
Luminaire Lumens: 1918.0 lumens  
Efficiency: N/A  
Efficacy: 85.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1700	1700	1700
5°	1693	1706	1703
10°	1689	1699	1706
15°	1675	1692	1702
20°	1660	1684	1701
25°	1642	1670	1699
30°	1620	1665	1699
35°	1590	1645	1697
40°	1555	1632	1713
45°	1520	1616	1740
50°	1469	1611	1788
55°	1402	1623	1856
60°	1322	1647	1947
65°	1248	1680	2080
70°	1066	1751	2227
75°	893	1824	2314
80°	731	1762	1931
85°	636	1306	1420



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.9	3.1
10°-20°	171.2	8.9
20°-30°	259.5	13.5
30°-40°	313.3	16.3
40°-50°	329.2	17.2
50°-60°	309.8	16.2
60°-70°	258.3	13.5
70°-80°	171.1	8.9
80°-90°	45.6	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°	490.6	25.6
0°-40°	803.9	41.9
0°-60°	1442.9	75.2
0°-90°	1918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1918.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	632	632	632	632	632	
5°	627	628	632	632	630	60
15°	601	604	607	610	611	170
25°	553	557	563	570	572	255
35°	484	489	501	512	517	303
45°	399	405	425	446	457	308
55°	299	312	346	381	396	267
65°	196	213	264	307	327	191
75°	86	120	175	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°	631.6	631.6	631.6	631.6	631.6
2.5°	629.2	630.4	632.8	632.8	631.6
5°	626.7	627.9	631.6	631.6	630.4
7.5°	623.1	624.3	626.7	629.2	627.9
10°	618.3	619.5	621.9	624.3	624.3
12.5°	609.8	611.0	615.8	617.1	617.1
15°	601.3	603.7	607.4	609.8	611.0
17.5°	590.4	592.9	597.7	602.5	602.5
20°	579.5	582.0	588.0	592.9	594.1
22.5°	566.2	569.9	575.9	582.0	584.4
25°	552.9	556.6	562.6	569.9	572.3
27.5°	537.2	540.8	549.3	557.8	559.0
30°	521.5	525.1	536.0	543.3	546.9
32.5°	502.1	507.0	517.8	528.7	532.4
35°	484.0	488.8	500.9	511.8	516.6
37.5°	464.6	469.4	482.8	496.1	502.1
40°	442.8	448.9	464.6	479.1	487.6
42.5°	422.3	428.3	444.0	463.4	471.9
45°	399.3	405.3	424.7	446.5	457.3
47.5°	375.1	382.3	405.3	431.9	442.8
50°	350.9	359.3	384.8	415.0	427.1
52.5°	325.5	336.4	365.4	398.1	412.6
55°	298.8	312.2	346.0	381.1	395.6
57.5°	273.4	285.5	325.5	363.0	378.7
60°	245.6	261.3	306.1	344.8	361.8
62.5°	219.0	235.9	285.5	326.7	344.8
65°	196.0	212.9	263.8	307.3	326.7
67.5°	165.8	188.7	245.6	286.7	306.1
70°	135.5	167.0	222.6	265.0	283.1
72.5°	112.5	142.8	199.6	242.0	258.9
75°	85.9	119.8	175.4	211.7	222.6
77.5°	64.1	99.2	150.0	168.2	169.4
80°	47.2	76.2	113.7	119.8	124.6
82.5°	32.7	53.2	73.8	81.1	83.5
85°	20.6	31.5	42.3	46.0	46.0
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)