

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: P312497

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-HRP-CA125-W2A-U-4000K**

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: P312497  
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-CA125-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 4000K 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**

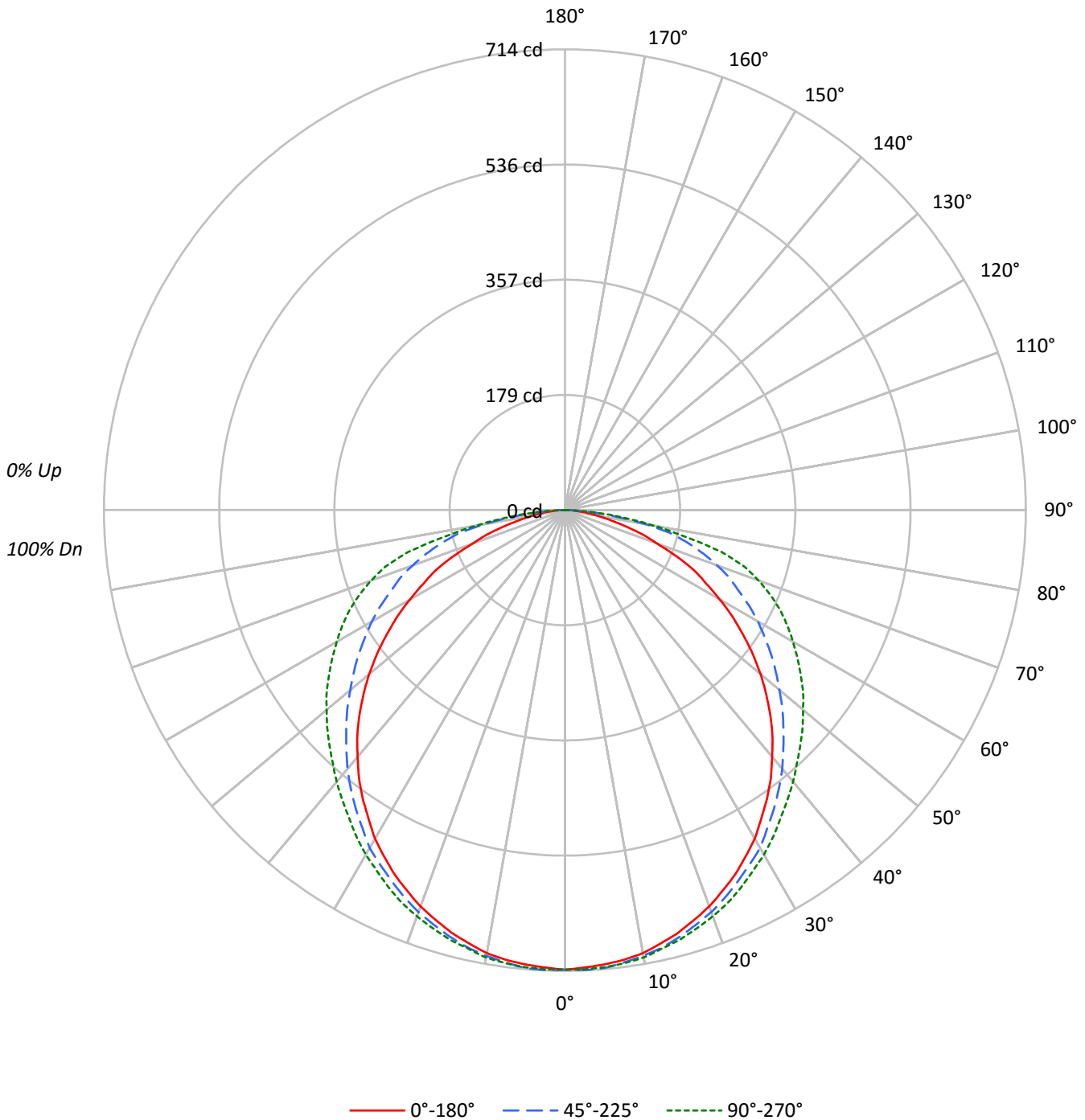
Lumens per Lamp: N/A  
Luminaire Lumens: 2163.0 lumens  
Efficiency: N/A  
Efficacy: 94.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1917	1917	1917
5°	1909	1924	1920
10°	1905	1916	1924
15°	1889	1908	1920
20°	1872	1899	1919
25°	1852	1884	1916
30°	1827	1878	1916
35°	1793	1856	1914
40°	1754	1841	1932
45°	1714	1823	1963
50°	1657	1816	2017
55°	1581	1831	2093
60°	1491	1858	2196
65°	1407	1894	2346
70°	1202	1976	2512
75°	1007	2057	2611
80°	824	1988	2177
85°	716	1476	1599



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.5	3.1
10°-20°	193.1	8.9
20°-30°	292.6	13.5
30°-40°	353.4	16.3
40°-50°	371.3	17.2
50°-60°	349.3	16.2
60°-70°	291.3	13.5
70°-80°	193.0	8.9
80°-90°	51.4	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°	553.2	25.6
0°-40°	906.6	41.9
0°-60°	1627.3	75.2
0°-90°	2163.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2163.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	712	712	712	712	712	
5°	707	708	712	712	711	67
15°	678	681	685	688	689	191
25°	624	628	634	643	645	287
35°	546	551	565	577	583	341
45°	450	457	479	504	516	347
55°	337	352	390	430	446	301
65°	221	240	298	347	368	215
75°	97	135	198	239	251	105
85°	23	36	48	52	52	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	712.3	712.3	712.3	712.3	712.3
2.5°	709.5	710.9	713.6	713.6	712.3
5°	706.8	708.2	712.3	712.3	710.9
7.5°	702.7	704.1	706.8	709.5	708.2
10°	697.2	698.6	701.3	704.1	704.1
12.5°	687.7	689.1	694.5	695.9	695.9
15°	678.1	680.9	685.0	687.7	689.1
17.5°	665.9	668.6	674.0	679.5	679.5
20°	653.6	656.3	663.1	668.6	670.0
22.5°	638.6	642.7	649.5	656.3	659.0
25°	623.6	627.7	634.5	642.7	645.4
27.5°	605.8	609.9	619.5	629.0	630.4
30°	588.1	592.2	604.5	612.6	616.7
32.5°	566.3	571.7	584.0	596.3	600.4
35°	545.8	551.2	564.9	577.2	582.6
37.5°	524.0	529.4	544.4	559.4	566.3
40°	499.4	506.2	524.0	540.3	549.9
42.5°	476.2	483.0	500.8	522.6	532.1
45°	450.3	457.1	478.9	503.5	515.8
47.5°	423.0	431.2	457.1	487.1	499.4
50°	395.7	405.2	433.9	468.0	481.7
52.5°	367.0	379.3	412.1	448.9	465.3
55°	337.0	352.0	390.2	429.8	446.2
57.5°	308.4	322.0	367.0	409.3	427.1
60°	277.0	294.7	345.2	388.9	408.0
62.5°	247.0	266.1	322.0	368.4	388.9
65°	221.0	240.1	297.5	346.6	368.4
67.5°	186.9	212.9	277.0	323.4	345.2
70°	152.8	188.3	251.1	298.8	319.3
72.5°	126.9	161.0	225.1	272.9	292.0
75°	96.9	135.1	197.8	238.8	251.1
77.5°	72.3	111.9	169.2	189.7	191.0
80°	53.2	86.0	128.3	135.1	140.5
82.5°	36.8	60.0	83.2	91.4	94.1
85°	23.2	35.5	47.8	51.8	51.8
87.5°	12.3	13.6	16.4	16.4	16.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)