

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: P312811

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-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: P312811  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)  
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-CP250-W2A-U-3500K  
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 2382.0 lumens  
Efficiency: N/A  
Efficacy: 106.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

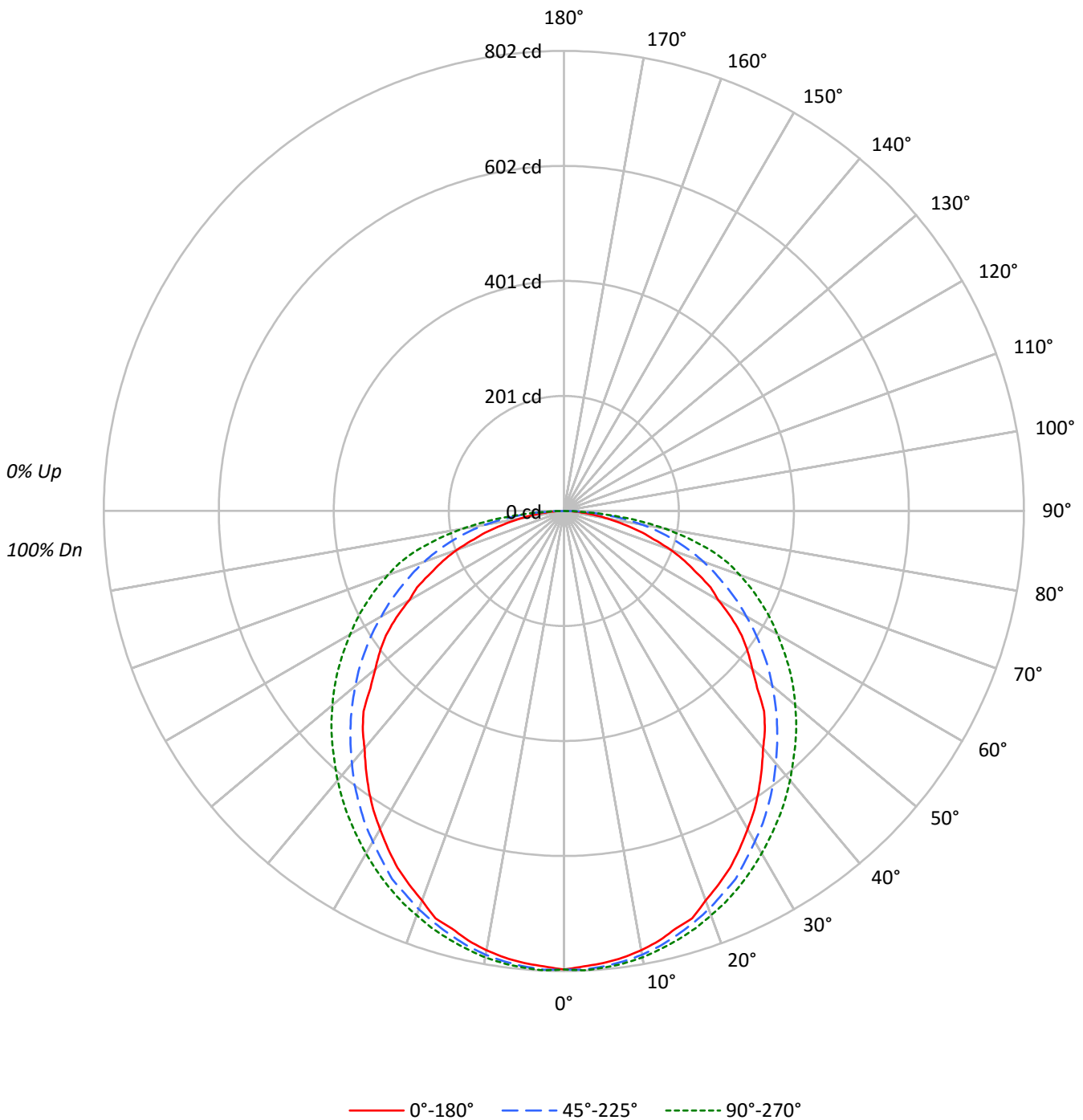
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2151	2151	2151
5°	2137	2153	2159
10°	2125	2146	2159
15°	2099	2131	2154
20°	2070	2116	2148
25°	2038	2102	2146
30°	1991	2069	2143
35°	1947	2045	2146
40°	1898	2018	2155
45°	1878	2000	2174
50°	1795	1986	2205
55°	1776	1979	2252
60°	1675	1976	2313
65°	1626	1989	2417
70°	1561	2036	2566
75°	1422	2098	2761
80°	1220	2173	2791
85°	985	2078	2393



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.6	3.2
10°-20°	215.7	9.1
20°-30°	324.7	13.6
30°-40°	389.7	16.4
40°-50°	407.3	17.1
50°-60°	379.6	15.9
60°-70°	311.3	13.1
70°-80°	209.8	8.8
80°-90°	68.3	2.9
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°	616.0	25.9
0°-40°	1005.7	42.2
0°-60°	1792.6	75.3
0°-90°	2382.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2382.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	799	799	799	799	799	
5°	791	794	797	798	799	75
15°	754	758	765	772	773	213
25°	686	691	708	718	723	316
35°	593	601	622	644	653	371
45°	494	497	526	558	571	377
55°	378	385	422	462	480	335
65°	255	267	312	358	380	254
75°	137	152	202	247	266	144
85°	32	46	67	79	78	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	799.2	799.2	799.2	799.2	799.2
2.5°	794.6	796.9	800.3	801.5	801.5
5°	791.2	793.5	796.9	798.0	799.2
7.5°	785.5	787.8	792.3	794.6	795.8
10°	777.5	779.8	785.5	788.9	790.1
12.5°	767.3	769.5	776.4	780.9	782.1
15°	753.6	758.1	765.0	771.8	773.0
17.5°	744.5	743.3	752.4	760.4	762.7
20°	722.8	728.5	738.8	747.9	750.2
22.5°	704.6	709.1	722.8	733.1	737.6
25°	686.3	690.9	708.0	718.2	722.8
27.5°	663.5	670.4	686.3	701.1	706.8
30°	640.7	647.6	665.8	682.9	689.7
32.5°	617.9	625.9	645.3	663.5	671.5
35°	592.8	600.8	622.5	644.1	653.3
37.5°	566.6	576.9	599.7	623.6	633.9
40°	540.4	550.6	574.6	602.0	613.4
42.5°	518.7	523.3	550.6	580.3	591.7
45°	493.6	497.1	525.6	557.5	571.2
47.5°	457.2	469.7	500.5	535.8	549.5
50°	428.7	442.3	474.3	511.9	526.7
52.5°	404.7	413.8	449.2	486.8	503.9
55°	378.5	385.3	421.8	461.7	480.0
57.5°	346.6	359.1	395.6	436.6	454.9
60°	311.2	327.2	367.1	411.6	429.8
62.5°	288.4	297.6	340.9	385.3	405.9
65°	255.4	266.8	312.4	358.0	379.6
67.5°	228.0	239.4	286.2	331.8	353.4
70°	198.4	209.8	258.8	304.4	326.1
72.5°	164.2	180.1	231.4	277.0	299.8
75°	136.8	151.6	201.8	247.4	265.6
77.5°	106.0	125.4	172.1	209.8	223.5
80°	78.7	98.0	140.2	167.6	180.1
82.5°	53.6	73.0	104.9	125.4	132.2
85°	31.9	45.6	67.3	78.7	77.5
87.5°	14.8	19.4	27.4	27.4	26.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)