

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: P312937

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-S-CP250-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: P312937  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-24HE-UNV-L83050-S-CP250-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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**

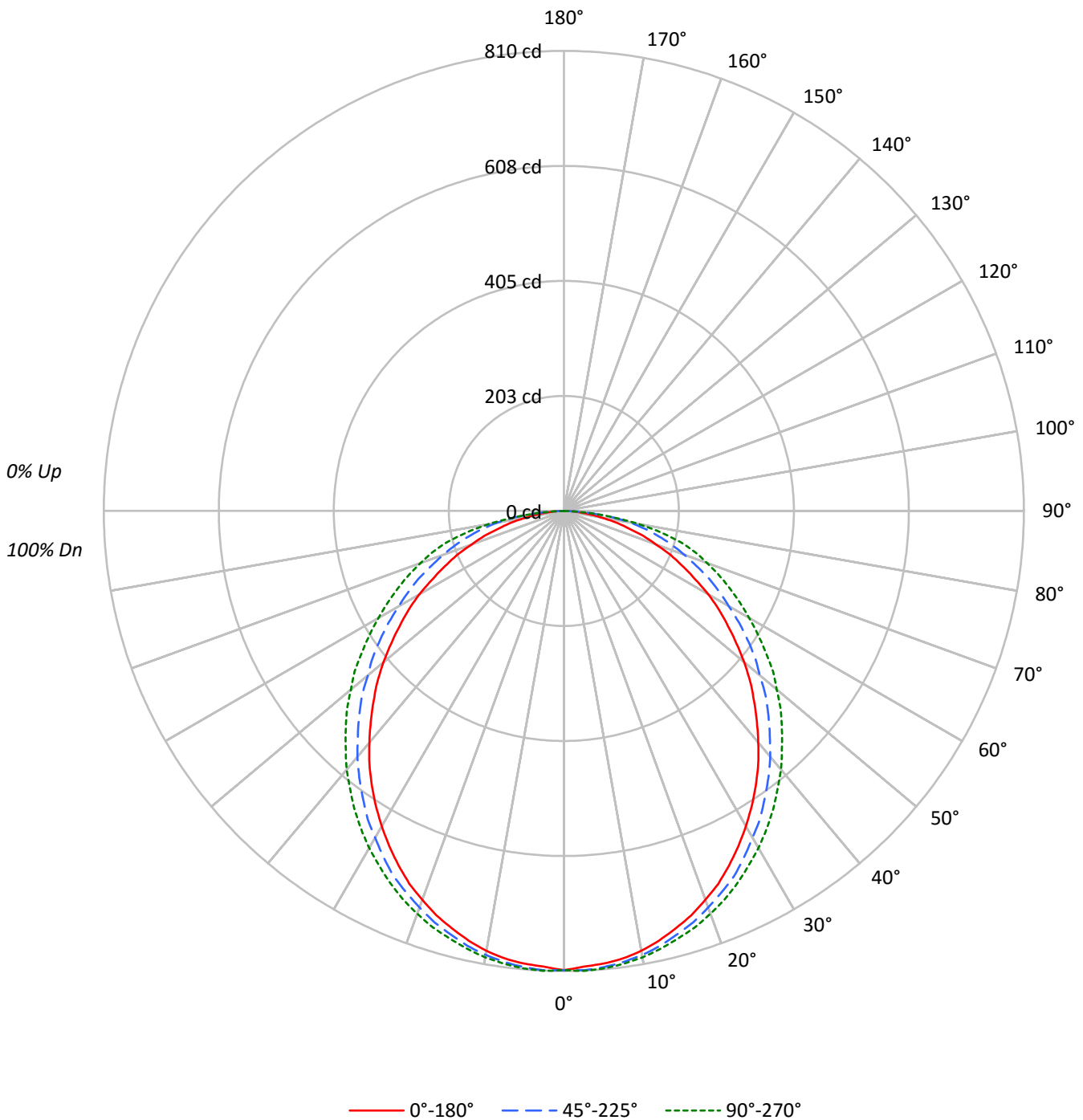
Lumens per Lamp: N/A  
Luminaire Lumens: 2256.0 lumens  
Efficiency: N/A  
Efficacy: 116.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	2175	2175	2175
5°	2161	2178	2184
10°	2149	2169	2180
15°	2120	2150	2170
20°	2086	2128	2161
25°	2044	2107	2147
30°	1992	2064	2129
35°	1937	2026	2109
40°	1871	1985	2089
45°	1803	1939	2067
50°	1736	1886	2049
55°	1654	1852	2035
60°	1581	1807	2028
65°	1475	1796	2051
70°	1358	1781	2112
75°	1226	1806	2222
80°	1060	1860	2087
85°	877	1559	1559



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.4	3.4
10°-20°	217.6	9.6
20°-30°	325.5	14.4
30°-40°	385.5	17.1
40°-50°	392.9	17.4
50°-60°	352.1	15.6
60°-70°	275.7	12.2
70°-80°	177.8	7.9
80°-90°	52.5	2.3
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°	619.5	27.5
0°-40°	1005.0	44.5
0°-60°	1750.0	77.6
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°	808	808	808	808	808	
5°	800	802	806	807	808	76
15°	761	765	772	778	779	215
25°	688	695	710	719	723	317
35°	590	597	617	636	642	368
45°	474	484	510	536	543	366
55°	353	364	395	422	434	316
65°	232	245	282	310	322	230
75°	118	136	174	203	214	126
85°	28	39	50	50	50	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	808.4	808.4	808.4	808.4	808.4
2.5°	803.1	805.2	809.4	810.5	810.5
5°	800.0	802.1	806.3	807.3	808.4
7.5°	794.7	795.8	801.0	803.1	804.2
10°	786.3	788.4	793.7	796.8	797.9
12.5°	774.7	777.9	784.2	788.4	789.4
15°	761.0	765.2	771.6	777.9	778.9
17.5°	746.3	750.5	758.9	766.3	768.4
20°	728.4	733.7	743.1	751.6	754.7
22.5°	710.5	714.7	726.3	736.8	740.0
25°	688.4	694.7	709.5	718.9	723.1
27.5°	665.2	672.6	687.3	700.0	704.2
30°	641.0	648.4	664.2	680.0	685.2
32.5°	615.8	624.2	643.1	658.9	664.2
35°	589.5	596.8	616.8	635.8	642.1
37.5°	562.1	568.4	591.6	611.6	617.9
40°	532.6	541.0	565.2	588.4	594.7
42.5°	503.1	512.6	536.8	562.1	568.4
45°	473.7	484.2	509.5	535.8	543.1
47.5°	445.2	453.7	482.1	507.4	517.9
50°	414.7	423.1	450.5	478.9	489.5
52.5°	383.1	394.7	424.2	451.6	464.2
55°	352.6	364.2	394.7	422.1	433.7
57.5°	324.2	333.7	365.3	393.7	405.3
60°	293.7	302.1	335.8	366.3	376.8
62.5°	261.0	273.7	308.4	336.8	349.5
65°	231.6	245.3	282.1	309.5	322.1
67.5°	204.2	216.8	252.6	282.1	295.8
70°	172.6	189.5	226.3	255.8	268.4
72.5°	147.4	162.1	200.0	229.5	243.2
75°	117.9	135.8	173.7	203.2	213.7
77.5°	93.7	111.6	147.4	170.5	175.8
80°	68.4	86.3	120.0	131.6	134.7
82.5°	46.3	63.2	86.3	89.5	90.5
85°	28.4	38.9	50.5	50.5	50.5
87.5°	13.7	15.8	17.9	16.8	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)