

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: P312935

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-S-CP250-W2A-U-3000K**

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: P312935  
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-3000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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**

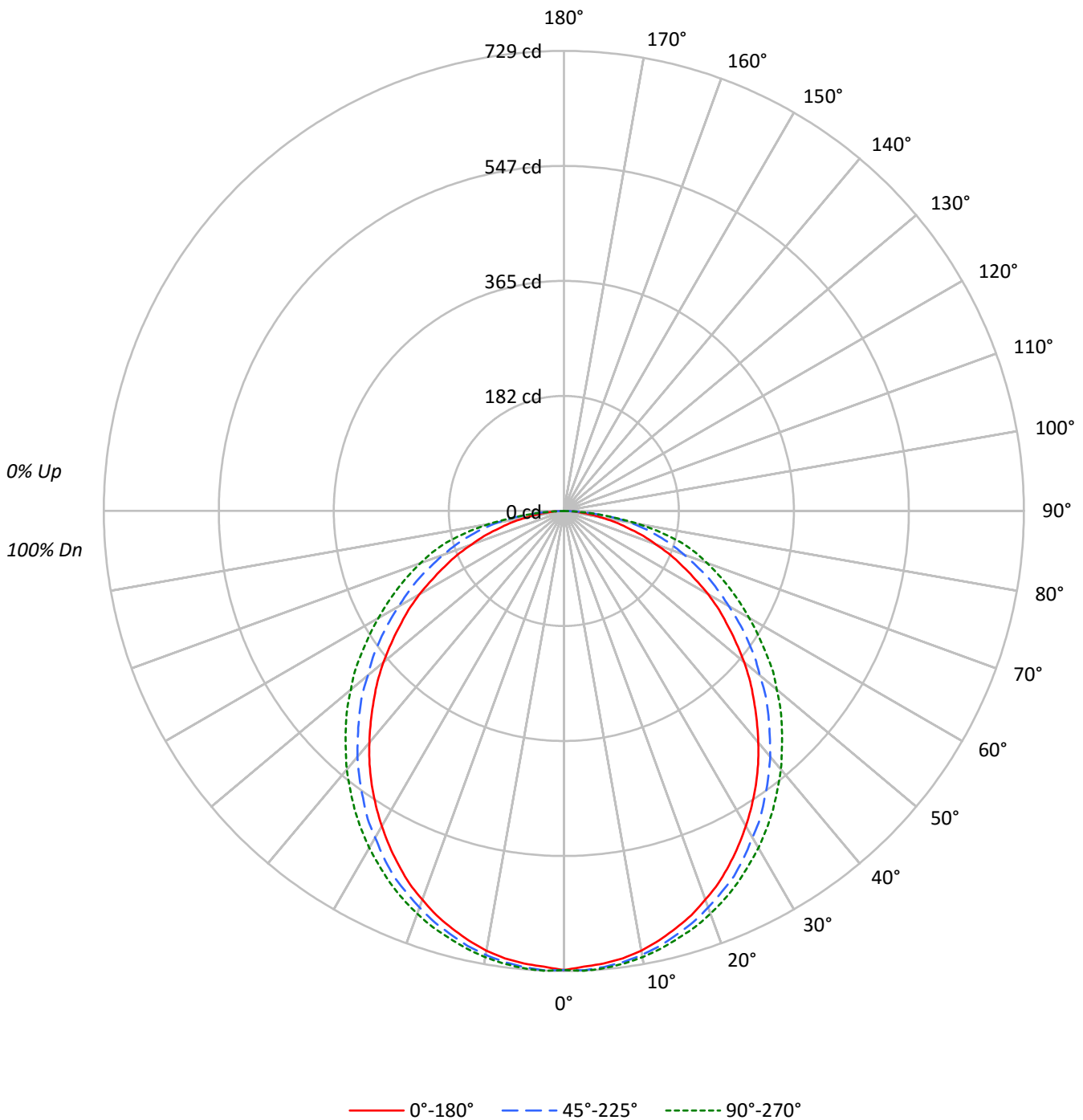
Lumens per Lamp: N/A  
Luminaire Lumens: 2030.0 lumens  
Efficiency: N/A  
Efficacy: 107.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P312935

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-S-CP250-W2A-U-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P312935

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-S-CP250-W2A-U-3000K

**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°	1957	1957	1957
5°	1944	1960	1965
10°	1933	1952	1962
15°	1908	1934	1953
20°	1877	1915	1945
25°	1839	1896	1932
30°	1792	1857	1916
35°	1742	1823	1898
40°	1684	1787	1880
45°	1622	1744	1860
50°	1562	1697	1844
55°	1489	1666	1831
60°	1422	1626	1825
65°	1327	1616	1845
70°	1222	1602	1900
75°	1103	1625	1999
80°	955	1674	1878
85°	790	1405	1405



TEST NUMBER: P312935

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-S-CP250-W2A-U-3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.8	3.4
10°-20°	195.8	9.6
20°-30°	292.9	14.4
30°-40°	346.9	17.1
40°-50°	353.5	17.4
50°-60°	316.8	15.6
60°-70°	248.1	12.2
70°-80°	160.0	7.9
80°-90°	47.3	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°	557.5	27.5
0°-40°	904.4	44.5
0°-60°	1574.7	77.6
0°-90°	2030.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2030.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	727	727	727	727	727	
5°	720	722	726	726	727	68
15°	685	689	694	700	701	193
25°	619	625	638	647	651	285
35°	530	537	555	572	578	331
45°	426	436	458	482	489	329
55°	317	328	355	380	390	284
65°	208	221	254	278	290	207
75°	106	122	156	183	192	114
85°	26	35	46	46	46	30
90°	0	0	0	0	0	



TEST NUMBER: P312935

CATALOG NUMBER: 22FC22-24HE-UNV-L83050-S-CP250-W2A-U-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	727.4	727.4	727.4	727.4	727.4
2.5°	722.7	724.6	728.4	729.3	729.3
5°	719.8	721.7	725.5	726.5	727.4
7.5°	715.1	716.0	720.8	722.7	723.6
10°	707.5	709.4	714.2	717.0	717.9
12.5°	697.1	699.9	705.6	709.4	710.4
15°	684.8	688.6	694.3	699.9	700.9
17.5°	671.5	675.3	682.9	689.5	691.4
20°	655.4	660.2	668.7	676.3	679.1
22.5°	639.3	643.1	653.5	663.0	665.8
25°	619.4	625.1	638.4	646.9	650.7
27.5°	598.6	605.2	618.5	629.9	633.6
30°	576.8	583.4	597.7	611.9	616.6
32.5°	554.1	561.7	578.7	592.9	597.7
35°	530.4	537.0	555.0	572.1	577.8
37.5°	505.8	511.5	532.3	550.3	556.0
40°	479.3	486.8	508.6	529.5	535.1
42.5°	452.7	461.3	483.0	505.8	511.5
45°	426.2	435.7	458.4	482.1	488.7
47.5°	400.6	408.2	433.8	456.5	466.0
50°	373.2	380.8	405.4	431.0	440.4
52.5°	344.8	355.2	381.7	406.3	417.7
55°	317.3	327.7	355.2	379.8	390.2
57.5°	291.7	300.2	328.7	354.2	364.7
60°	264.3	271.8	302.1	329.6	339.1
62.5°	234.9	246.3	277.5	303.1	314.5
65°	208.4	220.7	253.8	278.5	289.8
67.5°	183.7	195.1	227.3	253.8	266.1
70°	155.3	170.5	203.6	230.2	241.5
72.5°	132.6	145.9	180.0	206.5	218.8
75°	106.1	122.2	156.3	182.8	192.3
77.5°	84.3	100.4	132.6	153.4	158.2
80°	61.6	77.7	108.0	118.4	121.2
82.5°	41.7	56.8	77.7	80.5	81.5
85°	25.6	35.0	45.5	45.5	45.5
87.5°	12.3	14.2	16.1	15.2	15.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)