

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: P312960

Luminaire Tested: **22FCZ2-29HE-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: P312960  
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: 22FCZ2-29HE-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**

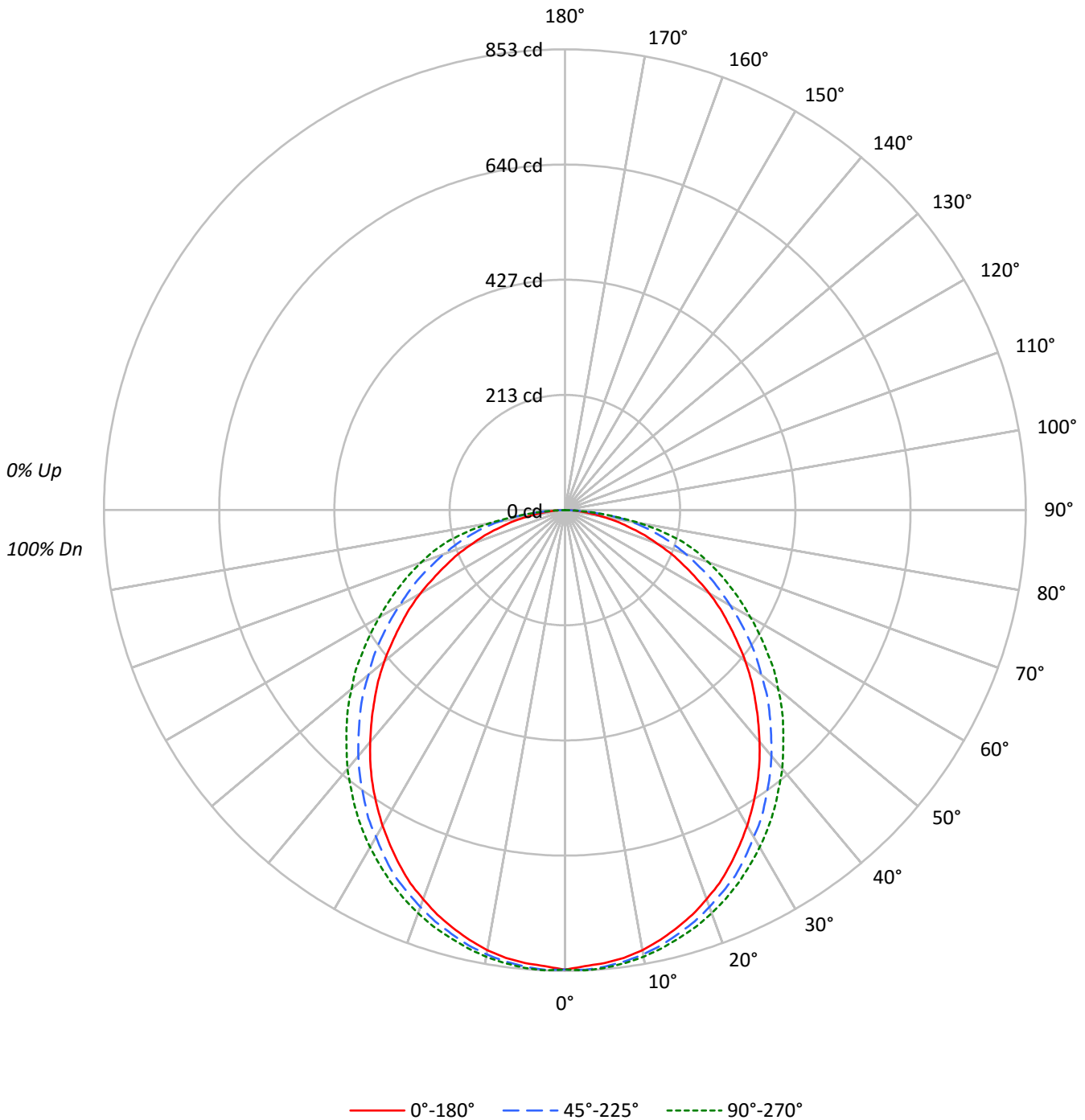
Lumens per Lamp: N/A  
Luminaire Lumens: 2374.0 lumens  
Efficiency: N/A  
Efficacy: 106.0 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	2289	2289	2289
5°	2274	2292	2298
10°	2261	2282	2294
15°	2231	2262	2284
20°	2195	2239	2274
25°	2151	2217	2260
30°	2096	2172	2241
35°	2038	2132	2220
40°	1969	2089	2198
45°	1897	2040	2175
50°	1827	1985	2156
55°	1741	1949	2141
60°	1663	1901	2134
65°	1552	1890	2158
70°	1430	1873	2223
75°	1290	1901	2338
80°	1116	1957	2197
85°	923	1643	1643



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.4	3.4
10°-20°	228.9	9.6
20°-30°	342.6	14.4
30°-40°	405.7	17.1
40°-50°	413.4	17.4
50°-60°	370.6	15.6
60°-70°	290.1	12.2
70°-80°	187.1	7.9
80°-90°	55.3	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°	651.9	27.5
0°-40°	1057.6	44.5
0°-60°	1841.6	77.6
0°-90°	2374.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2374.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	851	851	851	851	851	
5°	842	844	848	850	851	80
15°	801	805	812	819	820	226
25°	724	731	747	756	761	333
35°	620	628	649	669	676	388
45°	498	510	536	564	572	385
55°	371	383	415	444	456	333
65°	244	258	297	326	339	242
75°	124	143	183	214	225	133
85°	30	41	53	53	53	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	850.7	850.7	850.7	850.7	850.7
2.5°	845.1	847.4	851.8	852.9	852.9
5°	841.8	844.0	848.5	849.6	850.7
7.5°	836.3	837.4	842.9	845.1	846.2
10°	827.4	829.6	835.2	838.5	839.6
12.5°	815.2	818.6	825.2	829.6	830.7
15°	800.8	805.3	811.9	818.6	819.7
17.5°	785.3	789.8	798.6	806.4	808.6
20°	766.5	772.0	782.0	790.9	794.2
22.5°	747.7	752.1	764.3	775.4	778.7
25°	724.4	731.1	746.6	756.5	761.0
27.5°	700.0	707.8	723.3	736.6	741.0
30°	674.6	682.3	698.9	715.5	721.1
32.5°	648.0	656.8	676.8	693.4	698.9
35°	620.3	628.0	649.1	669.0	675.7
37.5°	591.5	598.1	622.5	643.5	650.2
40°	560.5	569.3	594.8	619.2	625.8
42.5°	529.5	539.4	564.9	591.5	598.1
45°	498.4	509.5	536.1	563.8	571.5
47.5°	468.5	477.4	507.3	533.9	545.0
50°	436.4	445.3	474.1	504.0	515.1
52.5°	403.2	415.4	446.4	475.2	488.5
55°	371.1	383.2	415.4	444.2	456.4
57.5°	341.2	351.1	384.4	414.3	426.4
60°	309.0	317.9	353.3	385.5	396.5
62.5°	274.7	288.0	324.5	354.4	367.7
65°	243.7	258.1	296.9	325.7	338.9
67.5°	214.9	228.2	265.8	296.9	311.3
70°	181.7	199.4	238.1	269.2	282.5
72.5°	155.1	170.6	210.5	241.5	255.9
75°	124.1	142.9	182.8	213.8	224.9
77.5°	98.6	117.4	155.1	179.4	185.0
80°	72.0	90.8	126.3	138.5	141.8
82.5°	48.7	66.5	90.8	94.2	95.3
85°	29.9	41.0	53.2	53.2	53.2
87.5°	14.4	16.6	18.8	17.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)