

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: P312505

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-HRP-CP187-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: P312505  
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-CP187-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" 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**

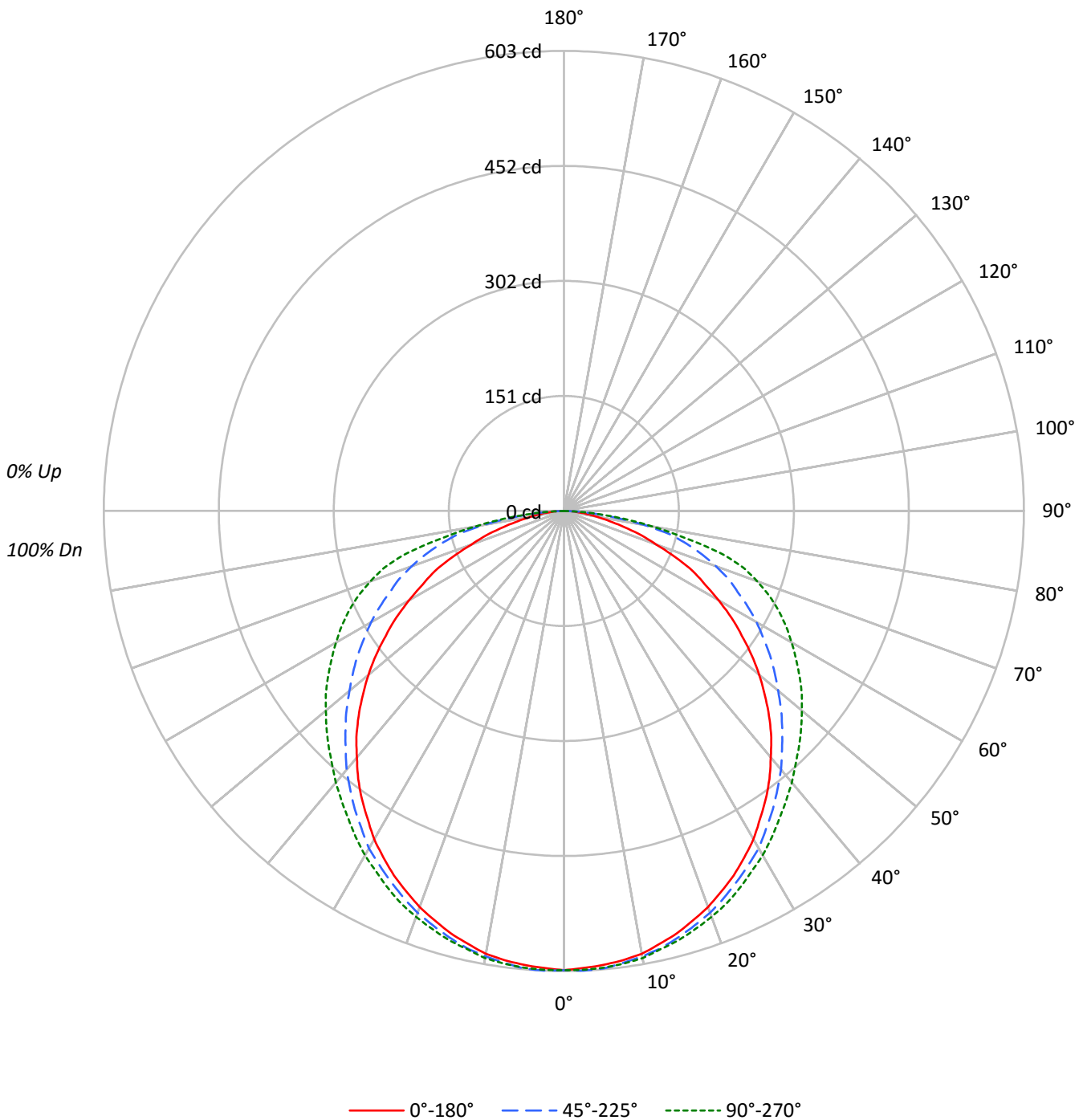
Lumens per Lamp: N/A  
Luminaire Lumens: 1828.0 lumens  
Efficiency: N/A  
Efficacy: 81.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1620	1620	1620
5°	1613	1626	1623
10°	1610	1620	1626
15°	1597	1613	1622
20°	1582	1605	1621
25°	1565	1592	1619
30°	1544	1587	1620
35°	1515	1568	1618
40°	1482	1555	1632
45°	1448	1541	1659
50°	1400	1535	1704
55°	1336	1547	1769
60°	1260	1570	1856
65°	1189	1601	1982
70°	1017	1670	2123
75°	852	1738	2206
80°	697	1680	1841
85°	605	1247	1352



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.0	3.1
10°-20°	163.2	8.9
20°-30°	247.3	13.5
30°-40°	298.6	16.3
40°-50°	313.8	17.2
50°-60°	295.2	16.2
60°-70°	246.2	13.5
70°-80°	163.1	8.9
80°-90°	43.5	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°	467.6	25.6
0°-40°	766.2	41.9
0°-60°	1375.2	75.2
0°-90°	1828.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1828.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	602	602	602	602	602	
5°	597	598	602	602	601	57
15°	573	575	579	581	582	162
25°	527	530	536	543	545	243
35°	461	466	477	488	492	288
45°	380	386	405	426	436	293
55°	285	298	330	363	377	255
65°	187	203	251	293	311	182
75°	82	114	167	202	212	89
85°	20	30	40	44	44	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	601.9	601.9	601.9	601.9	601.9
2.5°	599.6	600.8	603.1	603.1	601.9
5°	597.3	598.5	601.9	601.9	600.8
7.5°	593.9	595.0	597.3	599.6	598.5
10°	589.3	590.4	592.7	595.0	595.0
12.5°	581.2	582.3	586.9	588.1	588.1
15°	573.1	575.4	578.9	581.2	582.3
17.5°	562.7	565.0	569.7	574.3	574.3
20°	552.4	554.7	560.4	565.0	566.2
22.5°	539.7	543.1	548.9	554.7	557.0
25°	527.0	530.4	536.2	543.1	545.4
27.5°	512.0	515.5	523.5	531.6	532.8
30°	497.0	500.5	510.8	517.8	521.2
32.5°	478.6	483.2	493.5	503.9	507.4
35°	461.3	465.9	477.4	487.8	492.4
37.5°	442.8	447.4	460.1	472.8	478.6
40°	422.0	427.8	442.8	456.6	464.7
42.5°	402.4	408.2	423.2	441.7	449.7
45°	380.5	386.3	404.8	425.5	435.9
47.5°	357.5	364.4	386.3	411.7	422.0
50°	334.4	342.5	366.7	395.5	407.1
52.5°	310.2	320.6	348.2	379.4	393.2
55°	284.8	297.5	329.8	363.2	377.1
57.5°	260.6	272.1	310.2	345.9	360.9
60°	234.1	249.1	291.7	328.6	344.8
62.5°	208.7	224.9	272.1	311.3	328.6
65°	186.8	203.0	251.4	292.9	311.3
67.5°	158.0	179.9	234.1	273.3	291.7
70°	129.2	159.1	212.2	252.5	269.8
72.5°	107.2	136.1	190.3	230.6	246.8
75°	81.9	114.2	167.2	201.8	212.2
77.5°	61.1	94.6	143.0	160.3	161.4
80°	45.0	72.6	108.4	114.2	118.8
82.5°	31.1	50.7	70.3	77.3	79.6
85°	19.6	30.0	40.4	43.8	43.8
87.5°	10.4	11.5	13.8	13.8	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)