

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: P312483

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-HRP-CP187-W2A-U-4500K**

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: P312483  
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: 22FCZ2-24HE-UNV-L83050-HRP-CP187-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"  
POLYCARB SHEET  
Light Source: (168) 4500K 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**

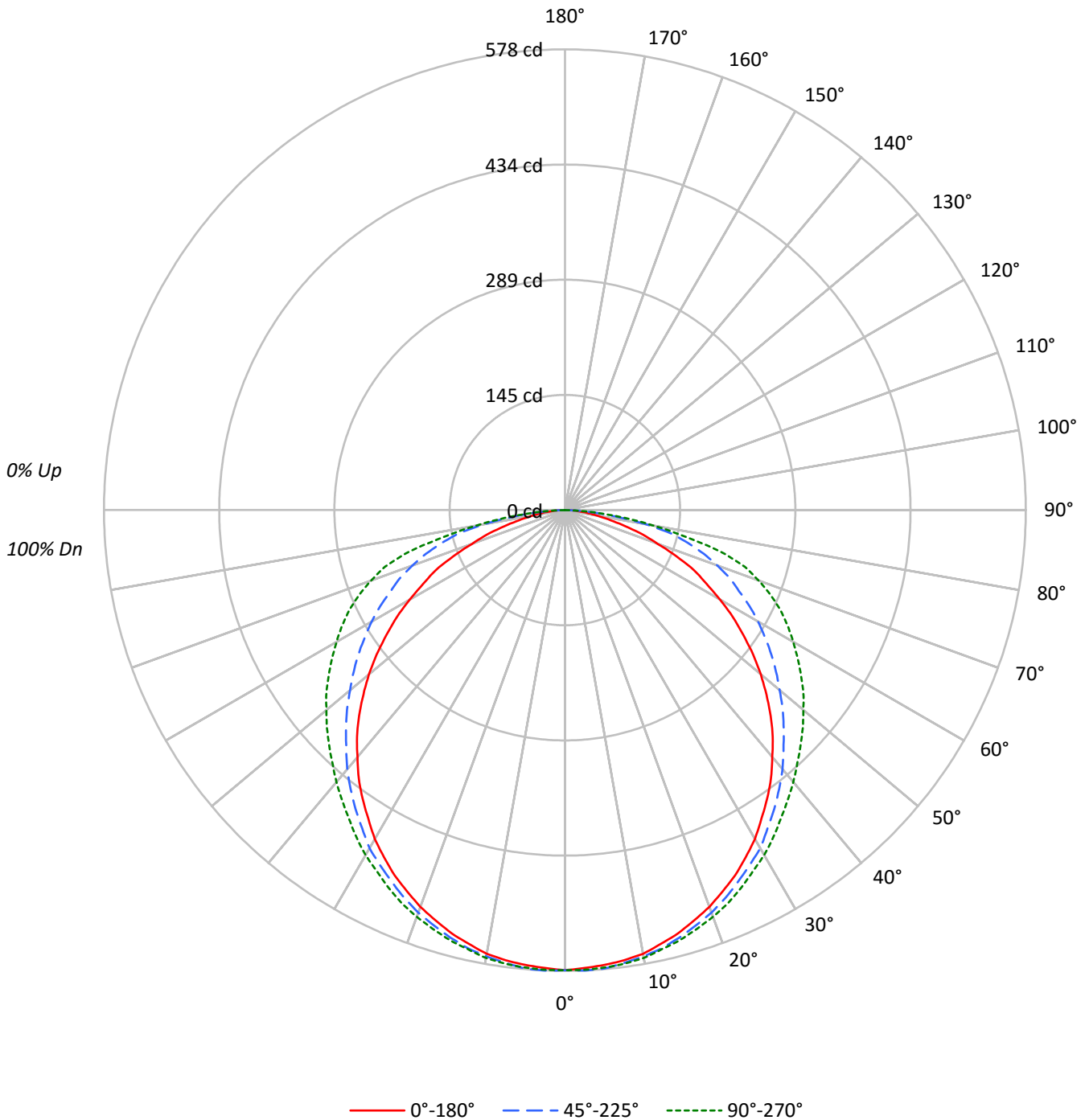
Lumens per Lamp: N/A  
Luminaire Lumens: 1753.0 lumens  
Efficiency: N/A  
Efficacy: 88.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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	83	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°	1553	1553	1553
5°	1547	1559	1556
10°	1544	1553	1559
15°	1531	1546	1556
20°	1517	1539	1555
25°	1501	1527	1553
30°	1481	1522	1553
35°	1453	1504	1551
40°	1422	1492	1565
45°	1389	1477	1591
50°	1343	1472	1634
55°	1281	1484	1696
60°	1208	1506	1779
65°	1140	1535	1901
70°	975	1601	2036
75°	816	1667	2116
80°	668	1610	1765
85°	580	1195	1297



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.7	3.1
10°-20°	156.5	8.9
20°-30°	237.2	13.5
30°-40°	286.4	16.3
40°-50°	300.9	17.2
50°-60°	283.1	16.2
60°-70°	236.1	13.5
70°-80°	156.4	8.9
80°-90°	41.7	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°	448.4	25.6
0°-40°	734.7	41.9
0°-60°	1318.8	75.2
0°-90°	1753.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1753.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	577	577	577	577	577	
5°	573	574	577	577	576	54
15°	550	552	555	557	558	155
25°	505	509	514	521	523	233
35°	442	447	458	468	472	277
45°	365	370	388	408	418	281
55°	273	285	316	348	362	244
65°	179	195	241	281	299	174
75°	78	110	160	194	204	85
85°	19	29	39	42	42	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	577.2	577.2	577.2	577.2	577.2
2.5°	575.0	576.1	578.3	578.3	577.2
5°	572.8	573.9	577.2	577.2	576.1
7.5°	569.5	570.6	572.8	575.0	573.9
10°	565.1	566.2	568.4	570.6	570.6
12.5°	557.3	558.4	562.9	564.0	564.0
15°	549.6	551.8	555.1	557.3	558.4
17.5°	539.6	541.9	546.3	550.7	550.7
20°	529.7	531.9	537.4	541.9	543.0
22.5°	517.5	520.8	526.4	531.9	534.1
25°	505.4	508.7	514.2	520.8	523.1
27.5°	491.0	494.3	502.0	509.8	510.9
30°	476.6	479.9	489.9	496.5	499.8
32.5°	458.9	463.3	473.3	483.2	486.6
35°	442.3	446.8	457.8	467.8	472.2
37.5°	424.6	429.1	441.2	453.4	458.9
40°	404.7	410.3	424.6	437.9	445.6
42.5°	385.9	391.5	405.8	423.5	431.3
45°	364.9	370.5	388.1	408.1	418.0
47.5°	342.8	349.4	370.5	394.8	404.7
50°	320.7	328.4	351.7	379.3	390.4
52.5°	297.5	307.4	334.0	363.8	377.1
55°	273.1	285.3	316.3	348.3	361.6
57.5°	249.9	261.0	297.5	331.7	346.1
60°	224.5	238.9	279.8	315.2	330.6
62.5°	200.2	215.6	261.0	298.6	315.2
65°	179.1	194.6	241.1	280.9	298.6
67.5°	151.5	172.5	224.5	262.1	279.8
70°	123.9	152.6	203.5	242.2	258.8
72.5°	102.8	130.5	182.5	221.2	236.6
75°	78.5	109.5	160.3	193.5	203.5
77.5°	58.6	90.7	137.1	153.7	154.8
80°	43.1	69.7	103.9	109.5	113.9
82.5°	29.9	48.7	67.5	74.1	76.3
85°	18.8	28.8	38.7	42.0	42.0
87.5°	10.0	11.1	13.3	13.3	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)