

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: P308424

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-RDP-CA08-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: P308424  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
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-L82765-RDP-CA08-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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**

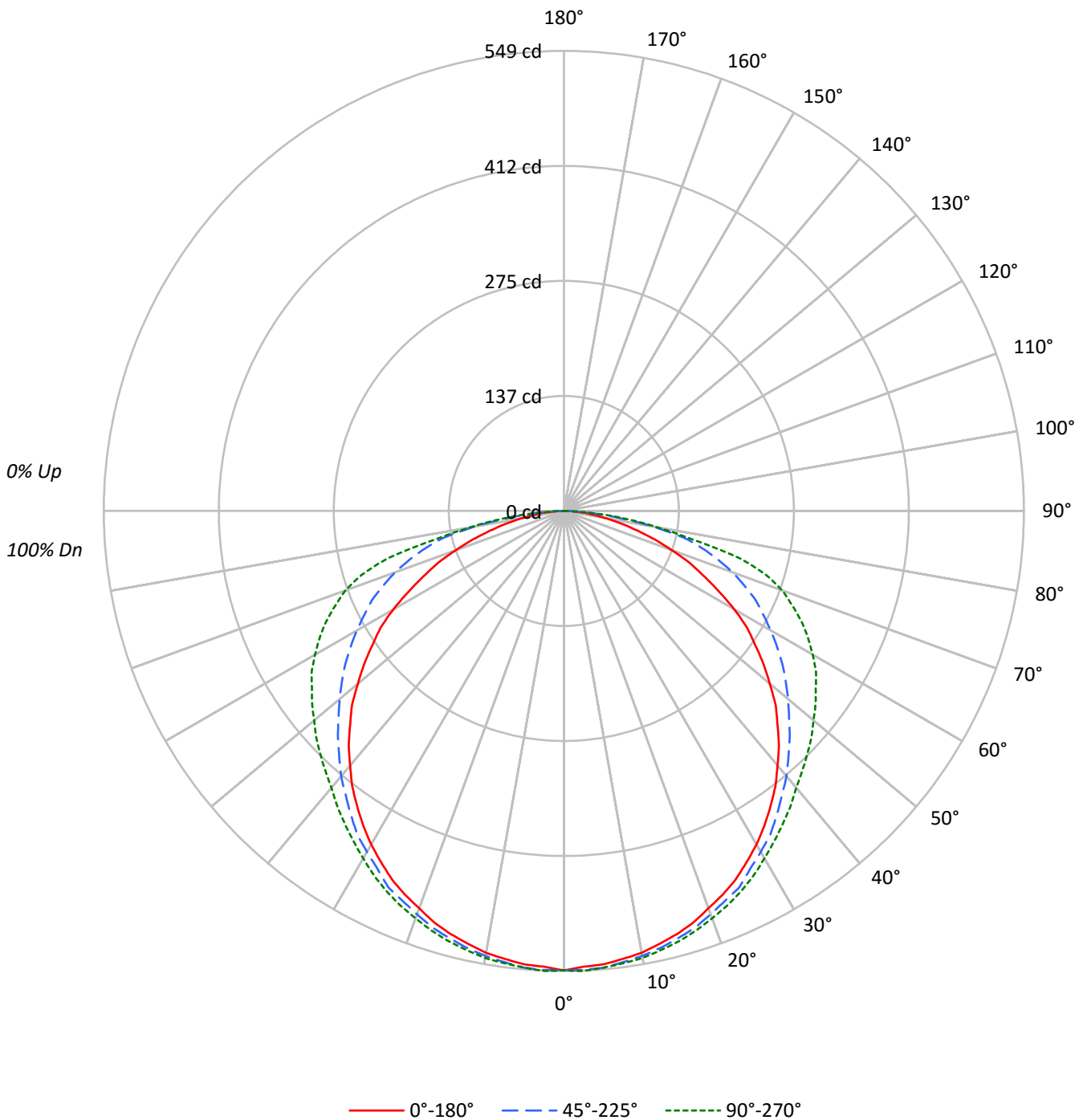
Lumens per Lamp: N/A  
Luminaire Lumens: 1745.0 lumens  
Efficiency: N/A  
Efficacy: 76.5 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	1475	1475	1475
5°	1467	1477	1477
10°	1463	1473	1480
15°	1456	1470	1480
20°	1445	1467	1481
25°	1441	1471	1486
30°	1428	1460	1488
35°	1413	1455	1497
40°	1394	1452	1515
45°	1373	1451	1563
50°	1343	1462	1629
55°	1307	1494	1722
60°	1264	1534	1844
65°	1177	1610	1994
70°	1081	1687	2182
75°	947	1775	2255
80°	815	1691	1770
85°	713	1229	1346



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.8	3.0
10°-20°	148.9	8.5
20°-30°	227.1	13.0
30°-40°	277.3	15.9
40°-50°	296.5	17.0
50°-60°	286.2	16.4
60°-70°	246.4	14.1
70°-80°	166.7	9.6
80°-90°	44.0	2.5
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°	427.9	24.5
0°-40°	705.2	40.4
0°-60°	1287.9	73.8
0°-90°	1745.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1745.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	548	548	548	548	548	
5°	543	544	547	547	547	52
15°	522	524	528	530	531	147
25°	485	488	496	498	501	223
35°	430	434	443	452	456	269
45°	361	367	381	400	411	278
55°	279	288	318	350	367	250
65°	185	203	253	293	313	184
75°	91	121	171	205	217	98
85°	23	32	40	41	44	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	548.1	548.1	548.1	548.1	548.1
2.5°	544.3	545.6	548.1	548.1	549.4
5°	543.0	544.3	546.9	546.9	546.9
7.5°	539.1	540.4	543.0	544.3	544.3
10°	535.3	536.6	539.1	540.4	541.7
12.5°	528.9	530.2	534.0	536.6	536.6
15°	522.5	523.7	527.6	530.2	531.4
17.5°	514.8	517.3	521.2	523.7	525.0
20°	504.5	507.1	512.2	516.0	517.3
22.5°	495.5	498.1	503.2	507.1	509.6
25°	485.2	487.8	495.5	498.1	500.6
27.5°	472.4	475.0	481.4	486.5	490.4
30°	459.6	462.1	469.8	476.2	478.8
32.5°	445.4	449.3	458.3	463.4	467.3
35°	430.0	433.9	442.9	451.9	455.7
37.5°	414.6	418.5	427.5	439.0	444.2
40°	396.7	401.8	413.3	428.8	431.3
42.5°	380.0	386.4	396.7	414.6	421.0
45°	360.7	367.1	381.3	400.5	410.8
47.5°	342.7	349.2	364.6	387.7	400.5
50°	320.9	329.9	349.2	376.1	389.0
52.5°	300.4	308.1	333.8	363.3	378.7
55°	278.6	287.5	318.4	350.4	367.1
57.5°	259.3	267.0	301.7	337.6	356.9
60°	234.9	245.2	285.0	323.5	342.7
62.5°	209.2	224.6	268.3	308.1	328.6
65°	184.9	202.8	252.9	292.7	313.2
67.5°	163.0	182.3	233.6	276.0	295.2
70°	137.4	161.7	214.4	255.5	277.3
72.5°	114.2	141.2	192.6	233.6	252.9
75°	91.1	120.7	170.7	205.4	216.9
77.5°	70.6	98.8	146.3	156.6	157.9
80°	52.6	78.3	109.1	110.4	114.2
82.5°	35.9	55.2	70.6	77.0	78.3
85°	23.1	32.1	39.8	41.1	43.6
87.5°	10.3	11.6	14.1	12.8	12.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)