

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: P308601

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CA08-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: P308601  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-20HE-UNV-L82765-CA08-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 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**

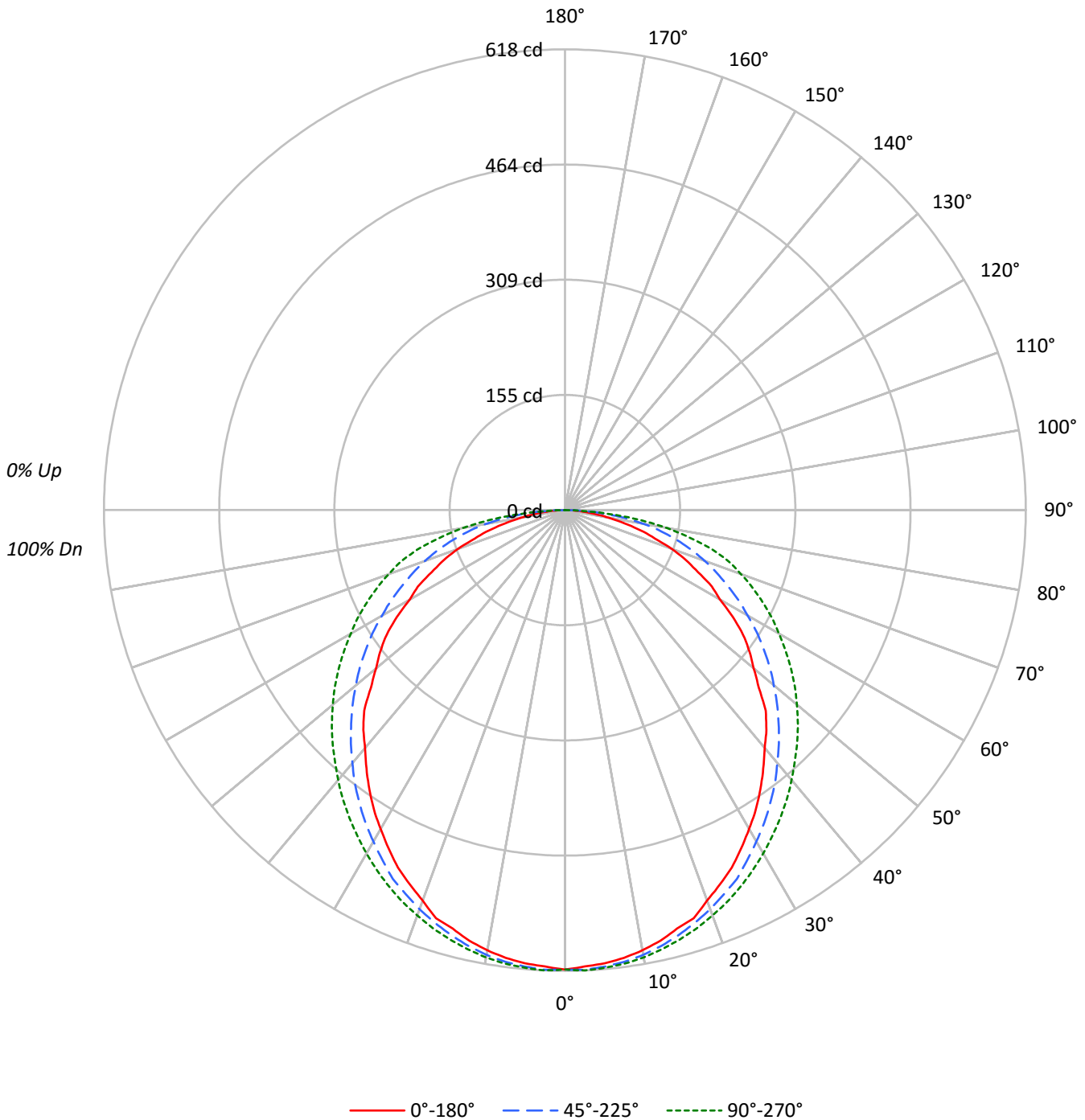
Lumens per Lamp: N/A  
Luminaire Lumens: 1837.0 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	1658	1658	1658
5°	1648	1660	1665
10°	1638	1655	1665
15°	1619	1644	1661
20°	1596	1631	1657
25°	1572	1621	1655
30°	1535	1596	1653
35°	1502	1577	1655
40°	1464	1557	1662
45°	1449	1542	1676
50°	1384	1531	1701
55°	1369	1526	1736
60°	1292	1524	1784
65°	1254	1534	1864
70°	1204	1570	1979
75°	1097	1618	2130
80°	941	1675	2152
85°	760	1602	1846



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.3	3.2
10°-20°	166.4	9.1
20°-30°	250.4	13.6
30°-40°	300.5	16.4
40°-50°	314.1	17.1
50°-60°	292.7	15.9
60°-70°	240.1	13.1
70°-80°	161.8	8.8
80°-90°	52.7	2.9
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°	475.1	25.9
0°-40°	775.6	42.2
0°-60°	1382.4	75.3
0°-90°	1837.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1837.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	616	616	616	616	616	
5°	610	612	615	615	616	58
15°	581	585	590	595	596	164
25°	529	533	546	554	557	243
35°	457	463	480	497	504	286
45°	381	383	405	430	440	291
55°	292	297	325	356	370	259
65°	197	206	241	276	293	196
75°	106	117	156	191	205	111
85°	25	35	52	61	60	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	616.3	616.3	616.3	616.3	616.3
2.5°	612.8	614.6	617.2	618.1	618.1
5°	610.2	611.9	614.6	615.4	616.3
7.5°	605.8	607.5	611.1	612.8	613.7
10°	599.6	601.4	605.8	608.4	609.3
12.5°	591.7	593.5	598.7	602.3	603.1
15°	581.2	584.7	590.0	595.2	596.1
17.5°	574.1	573.2	580.3	586.4	588.2
20°	557.4	561.8	569.7	576.8	578.5
22.5°	543.4	546.9	557.4	565.3	568.9
25°	529.3	532.8	546.0	553.9	557.4
27.5°	511.7	517.0	529.3	540.7	545.1
30°	494.1	499.4	513.5	526.6	531.9
32.5°	476.5	482.7	497.6	511.7	517.9
35°	457.2	463.3	480.1	496.8	503.8
37.5°	437.0	444.9	462.5	480.9	488.8
40°	416.7	424.7	443.1	464.2	473.0
42.5°	400.0	403.6	424.7	447.5	456.3
45°	380.7	383.3	405.3	429.9	440.5
47.5°	352.6	362.2	386.0	413.2	423.8
50°	330.6	341.1	365.8	394.8	406.2
52.5°	312.1	319.2	346.4	375.4	388.6
55°	291.9	297.2	325.3	356.1	370.1
57.5°	267.3	277.0	305.1	336.7	350.8
60°	240.0	252.3	283.1	317.4	331.5
62.5°	222.4	229.5	262.9	297.2	313.0
65°	196.9	205.7	240.9	276.1	292.8
67.5°	175.8	184.6	220.7	255.9	272.6
70°	153.0	161.8	199.6	234.8	251.5
72.5°	126.6	138.9	178.5	213.6	231.2
75°	105.5	116.9	155.6	190.8	204.9
77.5°	81.8	96.7	132.8	161.8	172.3
80°	60.7	75.6	108.1	129.2	138.9
82.5°	41.3	56.3	80.9	96.7	102.0
85°	24.6	35.2	51.9	60.7	59.8
87.5°	11.4	14.9	21.1	21.1	20.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)