

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: P308150

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CA08-W2A-U-2700K**

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: P308150  
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-L82765-HRP-CA08-W2A-U-2700K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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**

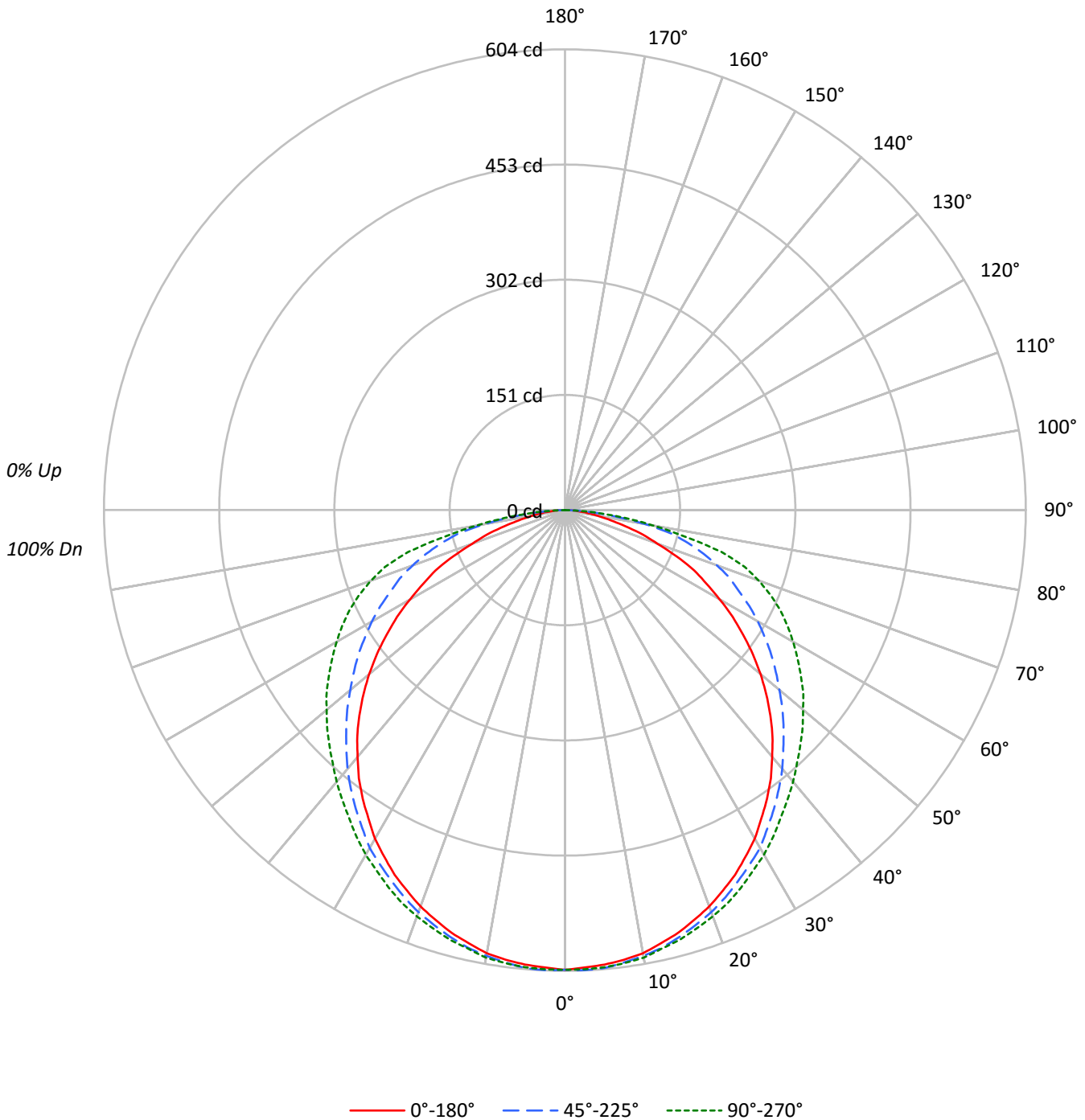
Lumens per Lamp: N/A  
Luminaire Lumens: 1830.0 lumens  
Efficiency: N/A  
Efficacy: 81.7 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1622	1622	1622
5°	1615	1628	1625
10°	1612	1621	1628
15°	1598	1614	1624
20°	1584	1607	1623
25°	1567	1594	1621
30°	1546	1589	1621
35°	1517	1570	1619
40°	1484	1557	1634
45°	1450	1542	1661
50°	1402	1537	1706
55°	1338	1549	1771
60°	1261	1572	1858
65°	1191	1603	1985
70°	1017	1671	2125
75°	853	1740	2208
80°	697	1681	1843
85°	605	1247	1355



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.1	3.1
10°-20°	163.4	8.9
20°-30°	247.6	13.5
30°-40°	299.0	16.3
40°-50°	314.1	17.2
50°-60°	295.6	16.2
60°-70°	246.4	13.5
70°-80°	163.3	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°	468.1	25.6
0°-40°	767.0	41.9
0°-60°	1376.7	75.2
0°-90°	1830.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1830.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	603	603	603	603	603	
5°	598	599	603	603	601	57
15°	574	576	580	582	583	162
25°	528	531	537	544	546	243
35°	462	466	478	488	493	289
45°	381	387	405	426	436	293
55°	285	298	330	364	378	255
65°	187	203	252	293	312	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°	602.6	602.6	602.6	602.6	602.6
2.5°	600.3	601.4	603.8	603.8	602.6
5°	598.0	599.1	602.6	602.6	601.4
7.5°	594.5	595.7	598.0	600.3	599.1
10°	589.9	591.1	593.4	595.7	595.7
12.5°	581.8	583.0	587.6	588.7	588.7
15°	573.7	576.0	579.5	581.8	583.0
17.5°	563.3	565.7	570.3	574.9	574.9
20°	553.0	555.3	561.0	565.7	566.8
22.5°	540.3	543.7	549.5	555.3	557.6
25°	527.6	531.0	536.8	543.7	546.0
27.5°	512.6	516.0	524.1	532.2	533.3
30°	497.5	501.0	511.4	518.3	521.8
32.5°	479.1	483.7	494.1	504.5	507.9
35°	461.8	466.4	477.9	488.3	492.9
37.5°	443.3	447.9	460.6	473.3	479.1
40°	422.5	428.3	443.3	457.1	465.2
42.5°	402.9	408.7	423.7	442.1	450.2
45°	381.0	386.7	405.2	426.0	436.4
47.5°	357.9	364.8	386.7	412.1	422.5
50°	334.8	342.9	367.1	396.0	407.5
52.5°	310.5	320.9	348.6	379.8	393.7
55°	285.1	297.8	330.2	363.6	377.5
57.5°	260.9	272.4	310.5	346.3	361.3
60°	234.3	249.4	292.1	329.0	345.2
62.5°	208.9	225.1	272.4	311.7	329.0
65°	187.0	203.2	251.7	293.2	311.7
67.5°	158.2	180.1	234.3	273.6	292.1
70°	129.3	159.3	212.4	252.8	270.1
72.5°	107.4	136.2	190.5	230.9	247.0
75°	82.0	114.3	167.4	202.0	212.4
77.5°	61.2	94.7	143.1	160.5	161.6
80°	45.0	72.7	108.5	114.3	118.9
82.5°	31.2	50.8	70.4	77.3	79.7
85°	19.6	30.0	40.4	43.9	43.9
87.5°	10.4	11.5	13.9	13.9	13.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)