

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: P308691

Luminaire Tested: **22FCZ2-29HE-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: P308691  
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: 22FCZ2-29HE-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: 2424.0 lumens  
Efficiency: N/A  
Efficacy: 109.2 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

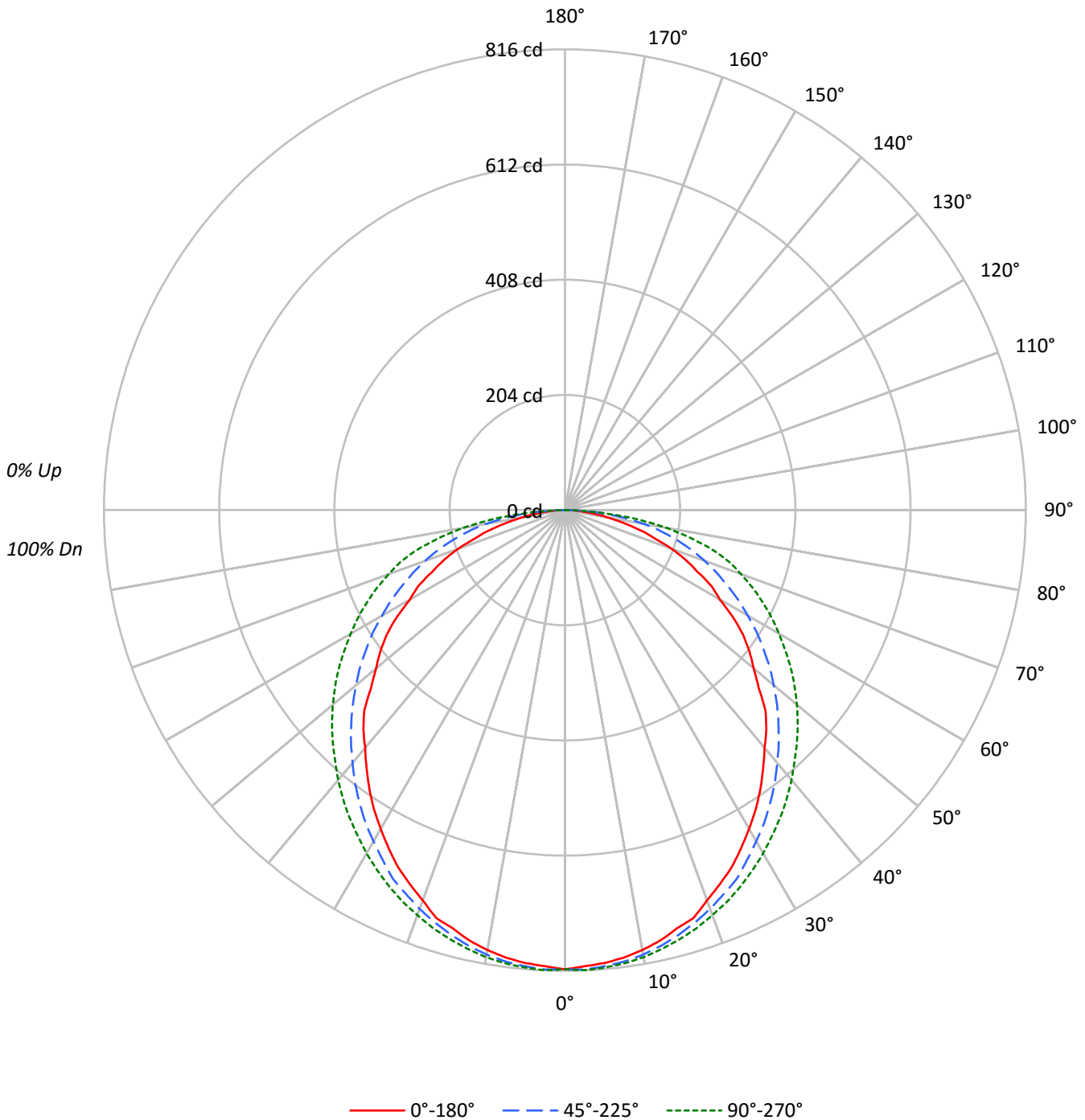
Input Watts (W): 22.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2189	2189	2189
5°	2175	2191	2197
10°	2162	2184	2197
15°	2137	2169	2191
20°	2106	2153	2186
25°	2074	2139	2184
30°	2026	2105	2181
35°	1982	2081	2184
40°	1932	2054	2193
45°	1912	2035	2212
50°	1826	2020	2244
55°	1807	2014	2291
60°	1704	2011	2354
65°	1655	2024	2460
70°	1589	2072	2611
75°	1447	2135	2810
80°	1241	2211	2841
85°	1003	2112	2436



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.0	3.2
10°-20°	219.5	9.1
20°-30°	330.4	13.6
30°-40°	396.6	16.4
40°-50°	414.5	17.1
50°-60°	386.3	15.9
60°-70°	316.8	13.1
70°-80°	213.5	8.8
80°-90°	69.5	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°	626.9	25.9
0°-40°	1023.4	42.2
0°-60°	1824.2	75.3
0°-90°	2424.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2424.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	813	813	813	813	813	
5°	805	808	811	812	813	76
15°	767	772	778	785	787	217
25°	698	703	720	731	736	321
35°	603	611	633	656	665	377
45°	502	506	535	567	581	384
55°	385	392	429	470	488	341
65°	260	272	318	364	386	259
75°	139	154	205	252	270	146
85°	32	46	68	80	79	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	813.3	813.3	813.3	813.3	813.3
2.5°	808.6	811.0	814.4	815.6	815.6
5°	805.2	807.5	811.0	812.1	813.3
7.5°	799.4	801.7	806.3	808.6	809.8
10°	791.2	793.5	799.4	802.8	804.0
12.5°	780.8	783.1	790.1	794.7	795.9
15°	766.9	771.5	778.5	785.4	786.6
17.5°	757.6	756.4	765.7	773.8	776.1
20°	735.5	741.3	751.8	761.1	763.4
22.5°	717.0	721.6	735.5	746.0	750.6
25°	698.4	703.1	720.5	730.9	735.5
27.5°	675.2	682.2	698.4	713.5	719.3
30°	652.0	659.0	677.5	694.9	701.9
32.5°	628.8	636.9	656.7	675.2	683.3
35°	603.3	611.4	633.4	655.5	664.8
37.5°	576.6	587.0	610.2	634.6	645.0
40°	549.9	560.4	584.7	612.6	624.2
42.5°	527.9	532.5	560.4	590.5	602.1
45°	502.3	505.8	534.8	567.3	581.2
47.5°	465.2	478.0	509.3	545.3	559.2
50°	436.2	450.1	482.6	520.9	536.0
52.5°	411.9	421.1	457.1	495.4	512.8
55°	385.2	392.1	429.3	469.9	488.4
57.5°	352.7	365.5	402.6	444.3	462.9
60°	316.7	333.0	373.6	418.8	437.4
62.5°	293.5	302.8	346.9	392.1	413.0
65°	259.9	271.5	317.9	364.3	386.3
67.5°	232.0	243.6	291.2	337.6	359.6
70°	201.9	213.5	263.4	309.8	331.8
72.5°	167.1	183.3	235.5	281.9	305.1
75°	139.2	154.3	205.3	251.8	270.3
77.5°	107.9	127.6	175.2	213.5	227.4
80°	80.1	99.8	142.7	170.5	183.3
82.5°	54.5	74.3	106.7	127.6	134.6
85°	32.5	46.4	68.4	80.1	78.9
87.5°	15.1	19.7	27.8	27.8	26.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)