

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: P312640

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-RDP-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: P312640  
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-L83050-RDP-CA08-W2A-U-3000K  
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**

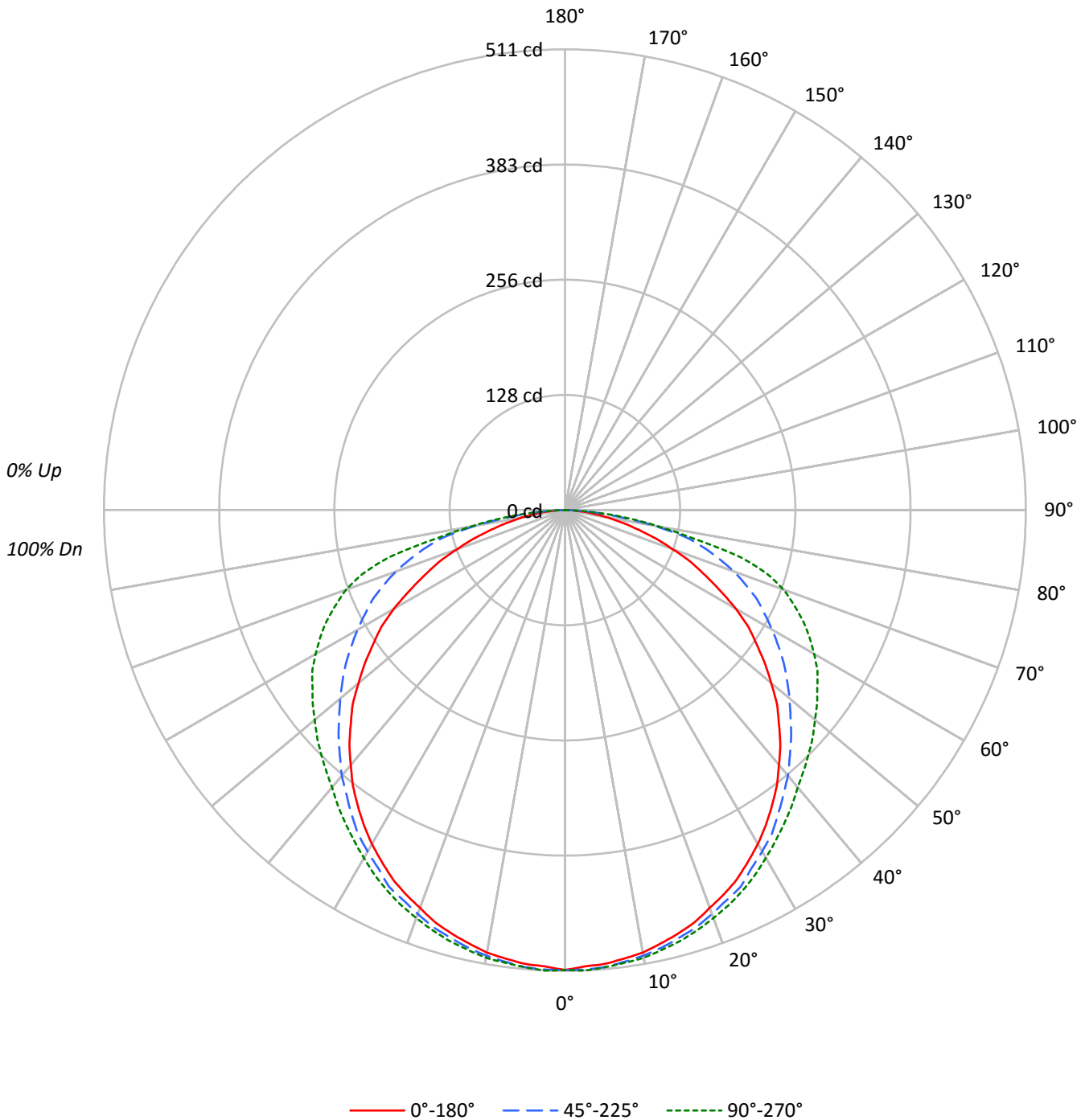
Lumens per Lamp: N/A  
Luminaire Lumens: 1624.0 lumens  
Efficiency: N/A  
Efficacy: 72.5 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	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°	1373	1373	1373
5°	1365	1375	1375
10°	1361	1371	1378
15°	1355	1368	1378
20°	1344	1365	1379
25°	1341	1369	1383
30°	1329	1359	1385
35°	1315	1354	1393
40°	1297	1351	1410
45°	1278	1350	1455
50°	1250	1361	1515
55°	1216	1390	1603
60°	1176	1427	1717
65°	1095	1499	1856
70°	1006	1570	2031
75°	882	1652	2099
80°	759	1573	1647
85°	664	1142	1254



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.3	3.0
10°-20°	138.6	8.5
20°-30°	211.4	13.0
30°-40°	258.1	15.9
40°-50°	276.0	17.0
50°-60°	266.4	16.4
60°-70°	229.3	14.1
70°-80°	155.1	9.6
80°-90°	40.9	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°	398.2	24.5
0°-40°	656.3	40.4
0°-60°	1198.6	73.8
0°-90°	1624.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1624.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	510	510	510	510	510	
5°	505	506	509	509	509	48
15°	486	487	491	493	495	137
25°	452	454	461	464	466	208
35°	400	404	412	420	424	250
45°	336	342	355	373	382	259
55°	259	268	296	326	342	232
65°	172	189	235	272	292	171
75°	85	112	159	191	202	91
85°	22	30	37	38	41	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	510.1	510.1	510.1	510.1	510.1
2.5°	506.5	507.7	510.1	510.1	511.3
5°	505.3	506.5	508.9	508.9	508.9
7.5°	501.8	503.0	505.3	506.5	506.5
10°	498.2	499.4	501.8	503.0	504.2
12.5°	492.2	493.4	497.0	499.4	499.4
15°	486.2	487.4	491.0	493.4	494.6
17.5°	479.1	481.5	485.0	487.4	488.6
20°	469.5	471.9	476.7	480.3	481.5
22.5°	461.1	463.5	468.3	471.9	474.3
25°	451.6	454.0	461.1	463.5	465.9
27.5°	439.6	442.0	448.0	452.8	456.4
30°	427.7	430.1	437.3	443.2	445.6
32.5°	414.6	418.1	426.5	431.3	434.9
35°	400.2	403.8	412.2	420.5	424.1
37.5°	385.9	389.5	397.8	408.6	413.4
40°	369.2	373.9	384.7	399.0	401.4
42.5°	353.6	359.6	369.2	385.9	391.9
45°	335.7	341.7	354.8	372.7	382.3
47.5°	319.0	325.0	339.3	360.8	372.7
50°	298.7	307.0	325.0	350.0	362.0
52.5°	279.6	286.7	310.6	338.1	352.4
55°	259.2	267.6	296.3	326.1	341.7
57.5°	241.3	248.5	280.7	314.2	332.1
60°	218.6	228.2	265.2	301.1	319.0
62.5°	194.7	209.1	249.7	286.7	305.8
65°	172.0	188.8	235.4	272.4	291.5
67.5°	151.7	169.6	217.4	256.9	274.8
70°	127.8	150.5	199.5	237.7	258.1
72.5°	106.3	131.4	179.2	217.4	235.4
75°	84.8	112.3	158.9	191.1	201.9
77.5°	65.7	92.0	136.2	145.8	146.9
80°	49.0	72.9	101.5	102.7	106.3
82.5°	33.5	51.4	65.7	71.7	72.9
85°	21.5	29.9	37.0	38.2	40.6
87.5°	9.6	10.8	13.1	11.9	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)