

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: P308963

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CA08-W2A-U-4000K**

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: P308963
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-S-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 2703.0 lumens
Efficiency: N/A
Efficacy: 119.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

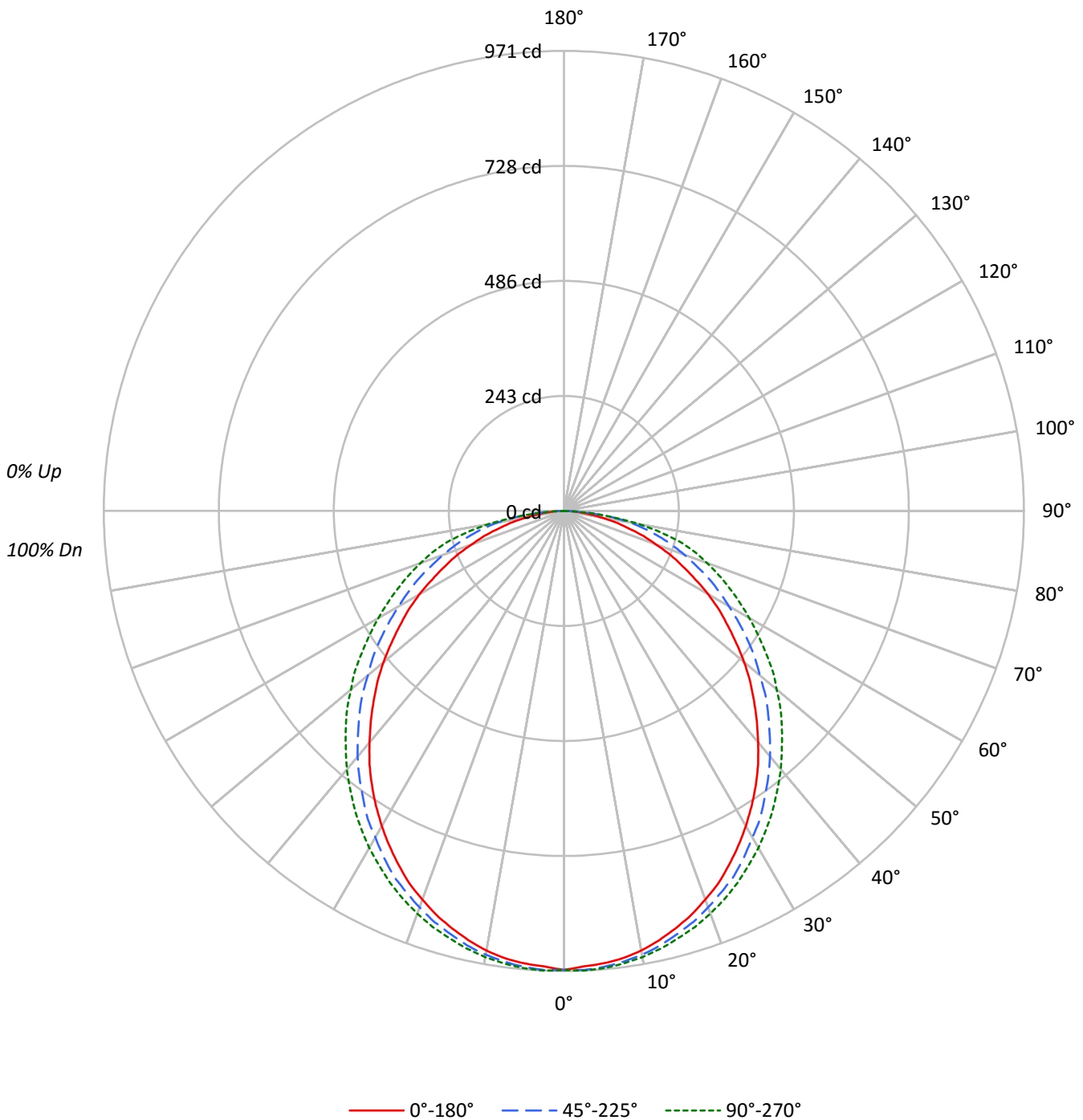
Input Watts (W): 22.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2606	2606	2606
5°	2589	2609	2616
10°	2574	2598	2612
15°	2540	2575	2600
20°	2499	2550	2590
25°	2449	2524	2572
30°	2386	2473	2551
35°	2320	2428	2527
40°	2242	2379	2503
45°	2160	2323	2477
50°	2080	2260	2455
55°	1982	2219	2438
60°	1894	2165	2430
65°	1767	2152	2457
70°	1627	2133	2530
75°	1468	2164	2662
80°	1271	2228	2501
85°	1053	1868	1868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.6	3.4
10°-20°	260.7	9.6
20°-30°	390.0	14.4
30°-40°	461.9	17.1
40°-50°	470.7	17.4
50°-60°	421.9	15.6
60°-70°	330.3	12.2
70°-80°	213.0	7.9
80°-90°	62.9	2.3
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°	742.3	27.5
0°-40°	1204.2	44.5
0°-60°	2096.8	77.6
0°-90°	2703.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2703.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	969	969	969	969	969	
5°	958	961	966	967	969	91
15°	912	917	924	932	933	257
25°	825	832	850	861	866	380
35°	706	715	739	762	769	441
45°	568	580	610	642	651	438
55°	422	436	473	506	520	379
65°	278	294	338	371	386	276
75°	141	163	208	243	256	151
85°	34	47	60	60	60	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	968.6	968.6	968.6	968.6	968.6
2.5°	962.3	964.8	969.8	971.1	971.1
5°	958.5	961.0	966.0	967.3	968.6
7.5°	952.2	953.4	959.7	962.3	963.5
10°	942.1	944.6	950.9	954.7	956.0
12.5°	928.2	932.0	939.6	944.6	945.9
15°	911.8	916.9	924.4	932.0	933.3
17.5°	894.2	899.2	909.3	918.1	920.6
20°	872.7	879.0	890.4	900.5	904.3
22.5°	851.3	856.3	870.2	882.8	886.6
25°	824.8	832.4	850.0	861.4	866.4
27.5°	797.1	805.9	823.5	838.7	843.7
30°	768.0	776.9	795.8	814.7	821.0
32.5°	737.8	747.9	770.6	789.5	795.8
35°	706.2	715.1	739.0	761.7	769.3
37.5°	673.5	681.0	708.8	732.7	740.3
40°	638.1	648.2	677.2	705.0	712.6
42.5°	602.8	614.2	643.2	673.5	681.0
45°	567.5	580.1	610.4	641.9	650.8
47.5°	533.5	543.6	577.6	607.9	620.5
50°	496.9	507.0	539.8	573.8	586.4
52.5°	459.1	472.9	508.2	541.0	556.2
55°	422.5	436.4	472.9	505.7	519.6
57.5°	388.4	399.8	437.6	471.7	485.5
60°	351.9	362.0	402.3	438.9	451.5
62.5°	312.8	327.9	369.5	403.6	418.7
65°	277.5	293.8	338.0	370.8	385.9
67.5°	244.7	259.8	302.7	338.0	354.4
70°	206.8	227.0	271.1	306.5	321.6
72.5°	176.6	194.2	239.6	274.9	291.3
75°	141.2	162.7	208.1	243.4	256.0
77.5°	112.2	133.7	176.6	204.3	210.6
80°	82.0	103.4	143.8	157.6	161.4
82.5°	55.5	75.7	103.4	107.2	108.5
85°	34.1	46.7	60.5	60.5	60.5
87.5°	16.4	18.9	21.4	20.2	20.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)