

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: P308965

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CA08-W2A-U-5000K**

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: P308965
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-5000K
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: 2788.0 lumens
Efficiency: N/A
Efficacy: 121.7 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

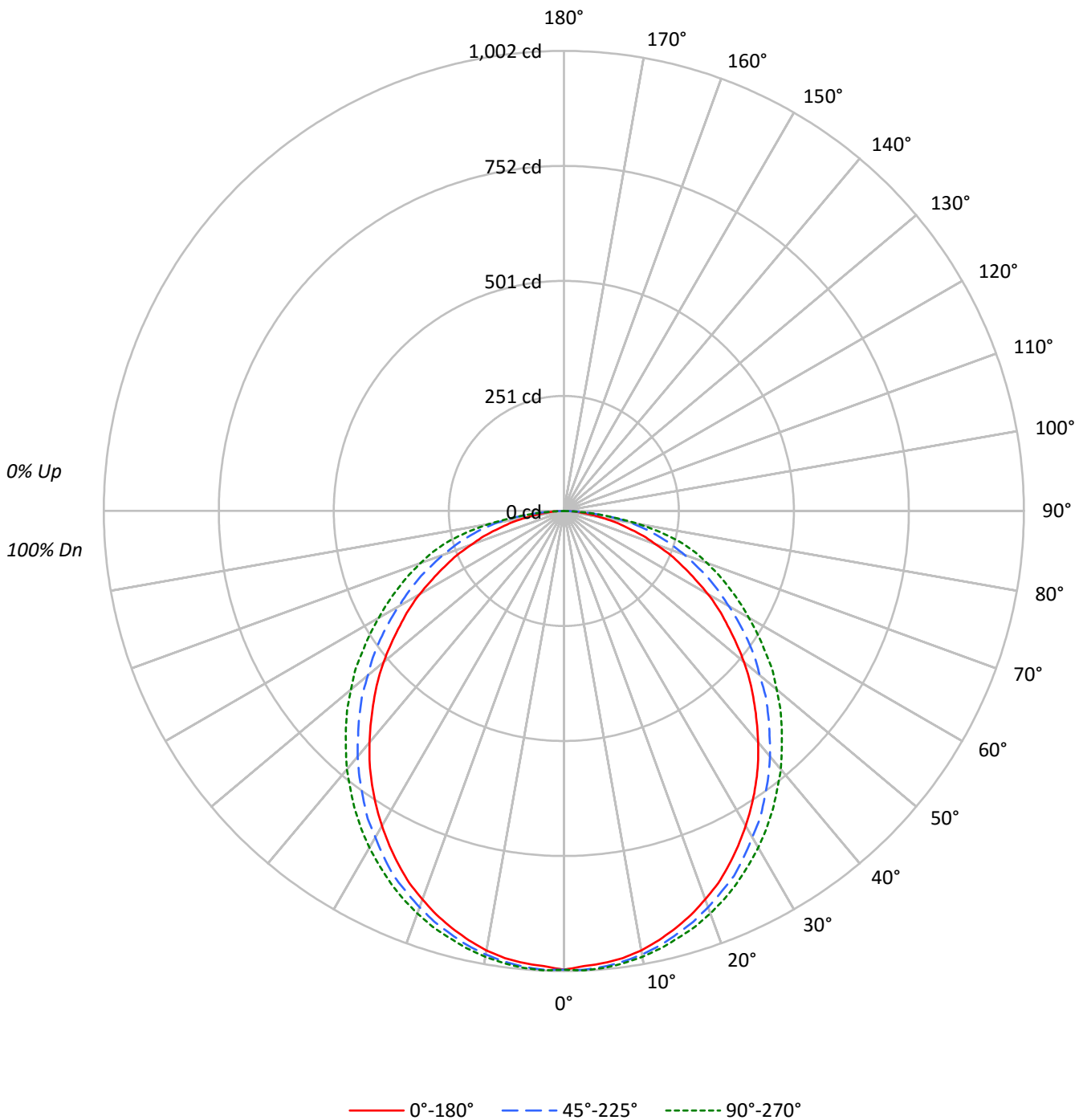
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2688	2688	2688
5°	2670	2692	2699
10°	2655	2680	2694
15°	2620	2656	2682
20°	2578	2630	2671
25°	2526	2603	2654
30°	2462	2550	2631
35°	2393	2504	2607
40°	2312	2454	2582
45°	2228	2396	2554
50°	2146	2331	2532
55°	2045	2289	2514
60°	1953	2234	2506
65°	1822	2220	2534
70°	1678	2201	2610
75°	1515	2231	2746
80°	1311	2298	2580
85°	1084	1927	1927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.5	3.4
10°-20°	268.9	9.6
20°-30°	402.3	14.4
30°-40°	476.4	17.1
40°-50°	485.5	17.4
50°-60°	435.2	15.6
60°-70°	340.7	12.2
70°-80°	219.7	7.9
80°-90°	64.9	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°	765.6	27.5
0°-40°	1242.0	44.5
0°-60°	2162.7	77.6
0°-90°	2788.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2788.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	999	999	999	999	999	
5°	989	991	996	998	999	94
15°	940	946	954	961	963	265
25°	851	858	877	888	894	392
35°	728	738	762	786	794	455
45°	585	598	630	662	671	452
55°	436	450	488	522	536	391
65°	286	303	349	382	398	284
75°	146	168	215	251	264	156
85°	35	48	62	62	62	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	999.0	999.0	999.0	999.0	999.0
2.5°	992.5	995.1	1000.3	1001.6	1001.6
5°	988.6	991.2	996.4	997.7	999.0
7.5°	982.1	983.4	989.9	992.5	993.8
10°	971.7	974.3	980.8	984.7	986.0
12.5°	957.4	961.3	969.1	974.3	975.6
15°	940.5	945.7	953.5	961.3	962.6
17.5°	922.3	927.5	937.9	947.0	949.6
20°	900.2	906.7	918.4	928.8	932.7
22.5°	878.1	883.3	897.6	910.6	914.5
25°	850.7	858.5	876.8	888.5	893.7
27.5°	822.1	831.2	849.4	865.0	870.2
30°	792.2	801.3	820.8	840.3	846.8
32.5°	761.0	771.4	794.8	814.3	820.8
35°	728.5	737.6	762.3	785.7	793.5
37.5°	694.6	702.4	731.1	755.8	763.6
40°	658.2	668.6	698.5	727.2	735.0
42.5°	621.8	633.5	663.4	694.6	702.4
45°	585.4	598.4	629.6	662.1	671.2
47.5°	550.2	560.7	595.8	627.0	640.0
50°	512.5	522.9	556.7	591.9	604.9
52.5°	473.5	487.8	524.2	558.1	573.7
55°	435.8	450.1	487.8	521.6	535.9
57.5°	400.7	412.4	451.4	486.5	500.8
60°	362.9	373.3	415.0	452.7	465.7
62.5°	322.6	338.2	381.1	416.3	431.9
65°	286.2	303.1	348.6	382.4	398.0
67.5°	252.4	268.0	312.2	348.6	365.5
70°	213.3	234.1	279.7	316.1	331.7
72.5°	182.1	200.3	247.2	283.6	300.5
75°	145.7	167.8	214.6	251.1	264.1
77.5°	115.8	137.9	182.1	210.7	217.2
80°	84.6	106.7	148.3	162.6	166.5
82.5°	57.2	78.0	106.7	110.6	111.9
85°	35.1	48.1	62.4	62.4	62.4
87.5°	16.9	19.5	22.1	20.8	20.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)