

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: P308690

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-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: P308690
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-2700K
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: 2355.0 lumens
Efficiency: N/A
Efficacy: 105.1 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

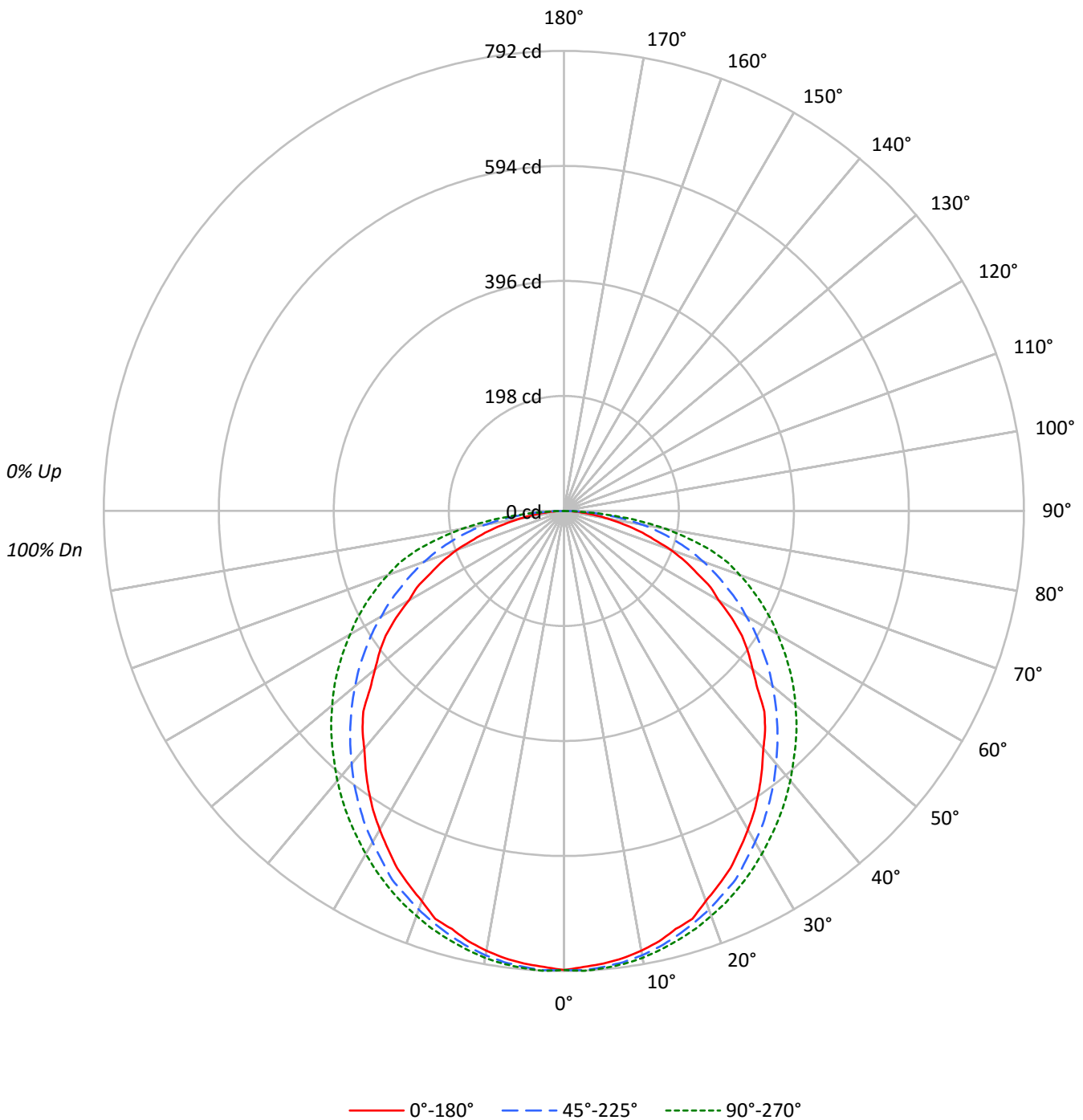
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2126	2126	2126
5°	2113	2128	2134
10°	2100	2122	2134
15°	2076	2107	2129
20°	2046	2092	2124
25°	2015	2078	2122
30°	1968	2045	2119
35°	1925	2022	2122
40°	1877	1996	2130
45°	1857	1977	2149
50°	1774	1963	2180
55°	1756	1956	2226
60°	1656	1953	2287
65°	1608	1966	2390
70°	1543	2013	2537
75°	1407	2074	2730
80°	1206	2148	2760
85°	976	2053	2365



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.8	3.2
10°-20°	213.3	9.1
20°-30°	321.0	13.6
30°-40°	385.3	16.4
40°-50°	402.7	17.1
50°-60°	375.3	15.9
60°-70°	307.8	13.1
70°-80°	207.4	8.8
80°-90°	67.6	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°	609.1	25.9
0°-40°	994.3	42.2
0°-60°	1772.3	75.3
0°-90°	2355.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2355.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	790	790	790	790	790	
5°	782	784	788	789	790	74
15°	745	750	756	763	764	211
25°	678	683	700	710	715	312
35°	586	594	615	637	646	366
45°	488	491	520	551	565	373
55°	374	381	417	456	474	332
65°	252	264	309	354	375	251
75°	135	150	200	245	263	142
85°	32	45	66	78	77	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	790.1	790.1	790.1	790.1	790.1
2.5°	785.6	787.9	791.2	792.4	792.4
5°	782.2	784.5	787.9	789.0	790.1
7.5°	776.6	778.9	783.4	785.6	786.7
10°	768.7	771.0	776.6	780.0	781.1
12.5°	758.6	760.8	767.6	772.1	773.2
15°	745.0	749.5	756.3	763.1	764.2
17.5°	736.0	734.9	743.9	751.8	754.1
20°	714.6	720.2	730.4	739.4	741.7
22.5°	696.6	701.1	714.6	724.7	729.3
25°	678.5	683.0	700.0	710.1	714.6
27.5°	656.0	662.8	678.5	693.2	698.8
30°	633.5	640.2	658.2	675.2	681.9
32.5°	610.9	618.8	638.0	656.0	663.9
35°	586.1	594.0	615.4	636.8	645.8
37.5°	560.2	570.3	592.9	616.5	626.7
40°	534.3	544.4	568.1	595.1	606.4
42.5°	512.8	517.4	544.4	573.7	585.0
45°	488.0	491.4	519.6	551.2	564.7
47.5°	452.0	464.4	494.8	529.8	543.3
50°	423.8	437.3	468.9	506.1	520.7
52.5°	400.1	409.2	444.1	481.3	498.2
55°	374.2	381.0	417.0	456.5	474.5
57.5°	342.6	355.0	391.1	431.7	449.7
60°	307.7	323.5	362.9	406.9	424.9
62.5°	285.2	294.2	337.0	381.0	401.3
65°	252.5	263.7	308.8	353.9	375.3
67.5°	225.4	236.7	282.9	328.0	349.4
70°	196.1	207.4	255.9	300.9	322.4
72.5°	162.3	178.1	228.8	273.9	296.4
75°	135.3	149.9	199.5	244.6	262.6
77.5°	104.8	124.0	170.2	207.4	220.9
80°	77.8	96.9	138.6	165.7	178.1
82.5°	53.0	72.1	103.7	124.0	130.7
85°	31.6	45.1	66.5	77.8	76.6
87.5°	14.7	19.2	27.1	27.1	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)