

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: P308692

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-CA08-W2A-U-3500K**

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: P308692
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-3500K
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: 2508.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

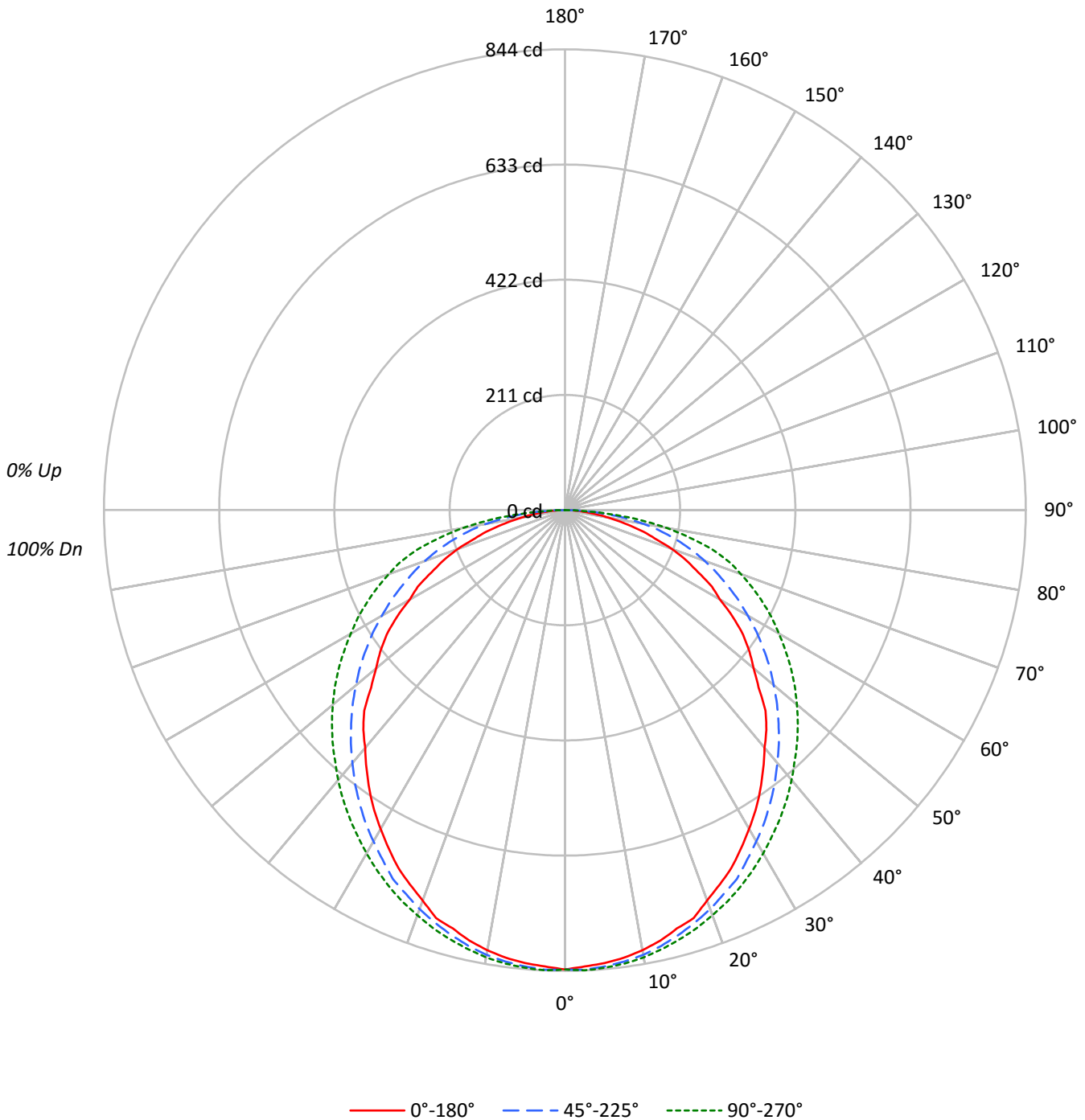
Input Watts (W): 22.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2264	2264	2264
5°	2250	2267	2273
10°	2237	2260	2273
15°	2210	2244	2267
20°	2179	2227	2262
25°	2146	2213	2260
30°	2096	2178	2257
35°	2051	2153	2259
40°	1999	2125	2269
45°	1978	2106	2289
50°	1889	2091	2322
55°	1870	2084	2371
60°	1764	2080	2435
65°	1712	2094	2545
70°	1644	2144	2701
75°	1497	2209	2908
80°	1283	2287	2940
85°	1037	2186	2519



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.6	3.2
10°-20°	227.1	9.1
20°-30°	341.8	13.6
30°-40°	410.3	16.4
40°-50°	428.9	17.1
50°-60°	399.6	15.9
60°-70°	327.8	13.1
70°-80°	220.9	8.8
80°-90°	71.9	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°	648.6	25.9
0°-40°	1058.9	42.2
0°-60°	1887.4	75.3
0°-90°	2508.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2508.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	842	842	842	842	842	
5°	833	836	839	840	842	79
15°	793	798	805	813	814	224
25°	723	727	745	756	761	332
35°	624	633	655	678	688	390
45°	520	523	553	587	601	397
55°	398	406	444	486	505	353
65°	269	281	329	377	400	267
75°	144	160	212	260	280	151
85°	34	48	71	83	82	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	841.5	841.5	841.5	841.5	841.5
2.5°	836.7	839.1	842.7	843.9	843.9
5°	833.1	835.5	839.1	840.3	841.5
7.5°	827.1	829.5	834.3	836.7	837.9
10°	818.6	821.0	827.1	830.7	831.9
12.5°	807.8	810.2	817.4	822.2	823.4
15°	793.4	798.2	805.4	812.6	813.8
17.5°	783.8	782.6	792.2	800.6	803.0
20°	761.0	767.0	777.8	787.4	789.8
22.5°	741.8	746.6	761.0	771.8	776.6
25°	722.6	727.4	745.4	756.2	761.0
27.5°	698.6	705.8	722.6	738.2	744.2
30°	674.6	681.8	701.0	719.0	726.2
32.5°	650.6	659.0	679.4	698.6	707.0
35°	624.2	632.6	655.4	678.2	687.8
37.5°	596.6	607.4	631.4	656.6	667.4
40°	569.0	579.8	605.0	633.8	645.8
42.5°	546.2	551.0	579.8	611.0	623.0
45°	519.8	523.4	553.4	587.0	601.4
47.5°	481.3	494.6	527.0	564.2	578.6
50°	451.3	465.7	499.4	539.0	554.6
52.5°	426.1	435.7	472.9	512.6	530.6
55°	398.5	405.7	444.1	486.1	505.4
57.5°	364.9	378.1	416.5	459.7	478.9
60°	327.7	344.5	386.5	433.3	452.5
62.5°	303.7	313.3	358.9	405.7	427.3
65°	268.9	280.9	328.9	376.9	399.7
67.5°	240.1	252.1	301.3	349.3	372.1
70°	208.9	220.9	272.5	320.5	343.3
72.5°	172.9	189.7	243.7	291.7	315.7
75°	144.0	159.6	212.5	260.5	279.7
77.5°	111.6	132.0	181.3	220.9	235.3
80°	82.8	103.2	147.6	176.5	189.7
82.5°	56.4	76.8	110.4	132.0	139.2
85°	33.6	48.0	70.8	82.8	81.6
87.5°	15.6	20.4	28.8	28.8	27.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)