

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: P312773

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-CA125-W2A-U-4500K**

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: P312773
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: 22FCZ2-24HE-UNV-L83050-CA125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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: 2319.0 lumens
Efficiency: N/A
Efficacy: 117.1 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

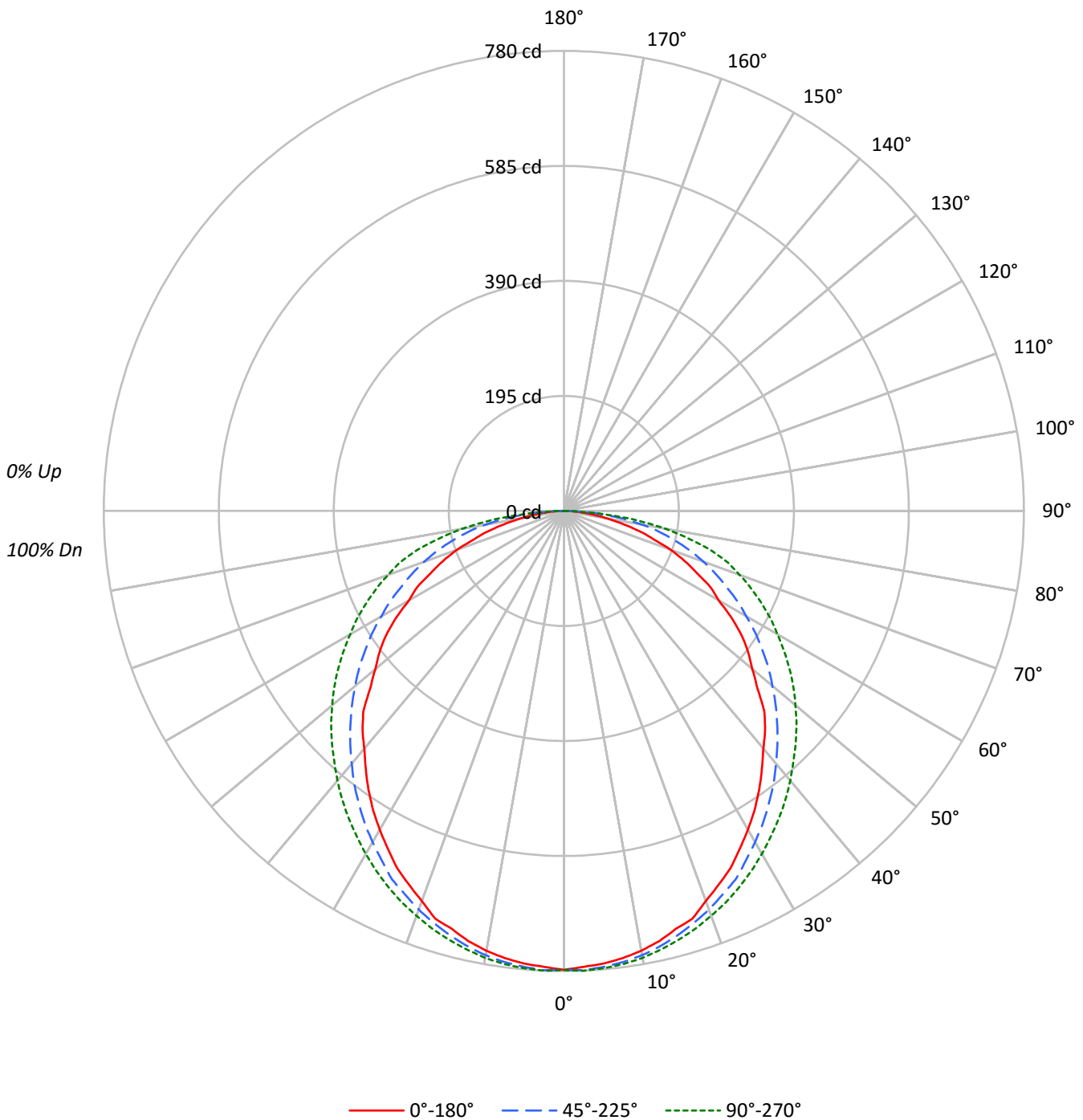
Input Watts (W): 19.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2094	2094	2094
5°	2081	2096	2102
10°	2068	2090	2102
15°	2044	2075	2096
20°	2015	2060	2091
25°	1984	2047	2089
30°	1938	2014	2087
35°	1896	1991	2089
40°	1848	1965	2098
45°	1829	1947	2116
50°	1747	1933	2147
55°	1729	1927	2192
60°	1631	1924	2252
65°	1583	1936	2353
70°	1519	1982	2497
75°	1385	2043	2689
80°	1187	2115	2718
85°	960	2022	2331



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.6	3.2
10°-20°	210.0	9.1
20°-30°	316.1	13.6
30°-40°	379.4	16.4
40°-50°	396.5	17.1
50°-60°	369.5	15.9
60°-70°	303.1	13.1
70°-80°	204.2	8.8
80°-90°	66.5	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°	599.7	25.9
0°-40°	979.1	42.2
0°-60°	1745.2	75.3
0°-90°	2319.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2319.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	778	778	778	778	778	
5°	770	772	776	777	778	73
15°	734	738	745	751	752	207
25°	668	673	689	699	704	307
35°	577	585	606	627	636	361
45°	481	484	512	543	556	367
55°	368	375	411	450	467	327
65°	249	260	304	348	370	247
75°	133	148	196	241	259	140
85°	31	44	66	77	76	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	778.0	778.0	778.0	778.0	778.0
2.5°	773.6	775.8	779.2	780.3	780.3
5°	770.3	772.5	775.8	776.9	778.0
7.5°	764.7	766.9	771.4	773.6	774.7
10°	757.0	759.2	764.7	768.1	769.2
12.5°	747.0	749.2	755.8	760.3	761.4
15°	733.6	738.1	744.7	751.4	752.5
17.5°	724.8	723.7	732.5	740.3	742.5
20°	703.7	709.2	719.2	728.1	730.3
22.5°	685.9	690.4	703.7	713.7	718.1
25°	668.2	672.6	689.3	699.2	703.7
27.5°	646.0	652.6	668.2	682.6	688.1
30°	623.8	630.4	648.2	664.8	671.5
32.5°	601.6	609.3	628.2	646.0	653.7
35°	577.2	584.9	606.0	627.1	636.0
37.5°	551.6	561.6	583.8	607.1	617.1
40°	526.1	536.1	559.4	586.0	597.1
42.5°	505.0	509.4	536.1	564.9	576.0
45°	480.6	483.9	511.7	542.7	556.1
47.5°	445.1	457.3	487.2	521.7	535.0
50°	417.3	430.6	461.7	498.3	512.8
52.5°	394.0	402.9	437.3	473.9	490.6
55°	368.5	375.1	410.7	449.5	467.3
57.5°	337.4	349.6	385.1	425.1	442.9
60°	303.0	318.5	357.4	400.7	418.4
62.5°	280.8	289.7	331.9	375.1	395.1
65°	248.6	259.7	304.1	348.5	369.6
67.5°	222.0	233.1	278.6	323.0	344.1
70°	193.1	204.2	251.9	296.3	317.4
72.5°	159.8	175.4	225.3	269.7	291.9
75°	133.2	147.6	196.5	240.8	258.6
77.5°	103.2	122.1	167.6	204.2	217.5
80°	76.6	95.5	136.5	163.2	175.4
82.5°	52.2	71.0	102.1	122.1	128.7
85°	31.1	44.4	65.5	76.6	75.5
87.5°	14.4	18.9	26.6	26.6	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)