

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: P308654

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CA125-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: P308654
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-L82765-CA125-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 2007.0 lumens
Efficiency: N/A
Efficacy: 106.2 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

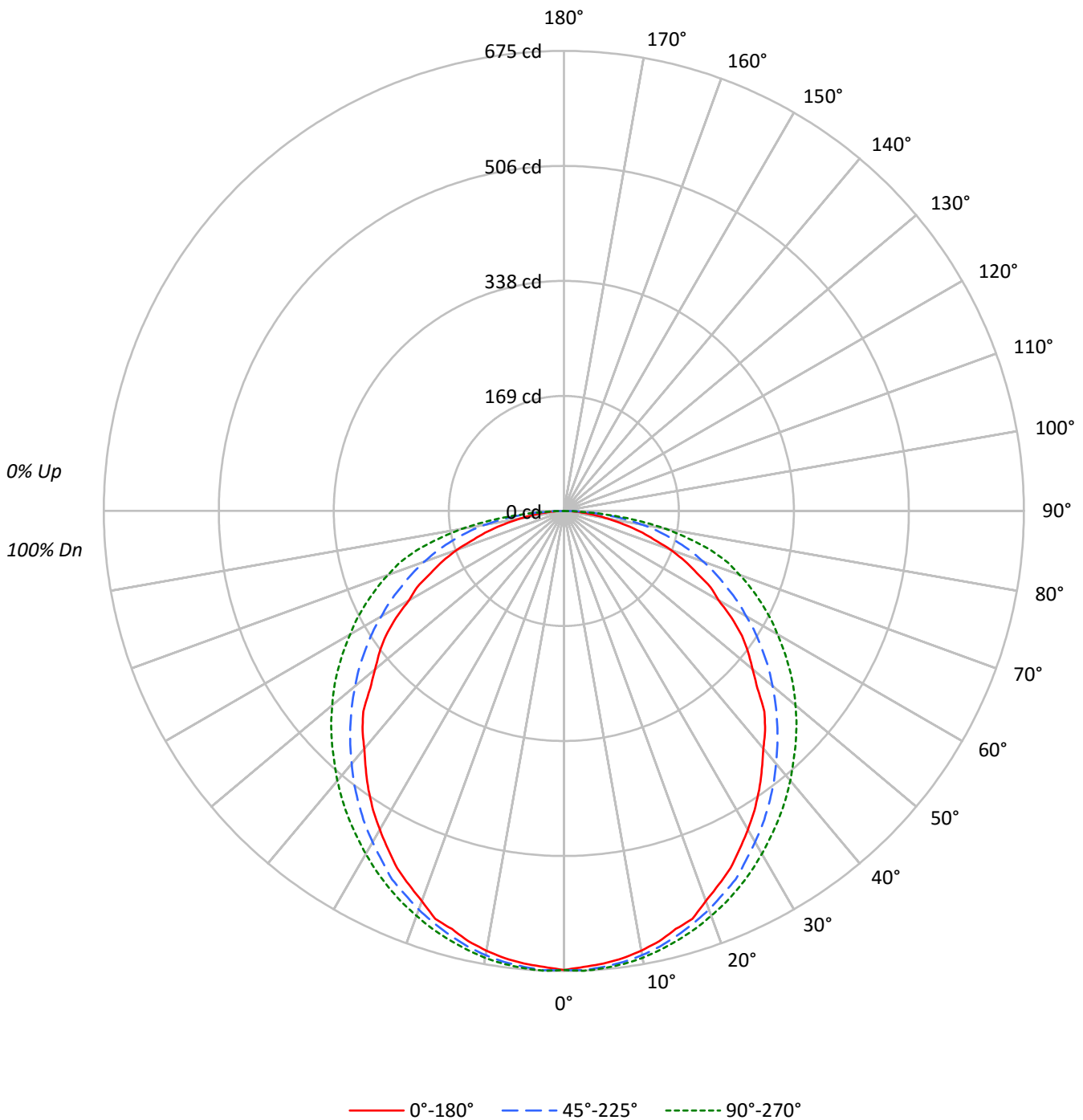
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1812	1812	1812
5°	1801	1814	1819
10°	1790	1808	1819
15°	1769	1796	1814
20°	1744	1783	1810
25°	1717	1771	1808
30°	1677	1743	1806
35°	1641	1723	1808
40°	1599	1701	1815
45°	1583	1685	1831
50°	1512	1673	1858
55°	1496	1667	1897
60°	1411	1665	1949
65°	1370	1676	2037
70°	1315	1716	2161
75°	1199	1768	2327
80°	1027	1832	2352
85°	831	1751	2016



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.7	3.2
10°-20°	181.8	9.1
20°-30°	273.6	13.6
30°-40°	328.3	16.4
40°-50°	343.2	17.1
50°-60°	319.8	15.9
60°-70°	262.3	13.1
70°-80°	176.7	8.8
80°-90°	57.6	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°	519.1	25.9
0°-40°	847.4	42.2
0°-60°	1510.4	75.3
0°-90°	2007.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2007.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	667	669	671	672	673	63
15°	635	639	644	650	651	179
25°	578	582	596	605	609	266
35°	500	506	524	543	550	312
45°	416	419	443	470	481	318
55°	319	325	355	389	404	283
65°	215	225	263	302	320	214
75°	115	128	170	208	224	121
85°	27	38	57	66	65	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	673.4	673.4	673.4	673.4	673.4
2.5°	669.5	671.4	674.3	675.3	675.3
5°	666.6	668.6	671.4	672.4	673.4
7.5°	661.8	663.8	667.6	669.5	670.5
10°	655.1	657.0	661.8	664.7	665.7
12.5°	646.5	648.4	654.2	658.0	659.0
15°	634.9	638.8	644.5	650.3	651.3
17.5°	627.3	626.3	634.0	640.7	642.6
20°	609.0	613.8	622.5	630.1	632.1
22.5°	593.6	597.5	609.0	617.7	621.5
25°	578.3	582.1	596.5	605.2	609.0
27.5°	559.1	564.8	578.3	590.8	595.6
30°	539.8	545.6	561.0	575.4	581.1
32.5°	520.6	527.4	543.7	559.1	565.8
35°	499.5	506.2	524.5	542.7	550.4
37.5°	477.4	486.1	505.3	525.4	534.1
40°	455.3	464.0	484.1	507.2	516.8
42.5°	437.1	440.9	464.0	488.9	498.5
45°	415.9	418.8	442.8	469.7	481.2
47.5°	385.2	395.8	421.7	451.5	463.0
50°	361.2	372.7	399.6	431.3	443.8
52.5°	341.0	348.7	378.5	410.2	424.6
55°	318.9	324.7	355.4	389.0	404.4
57.5°	292.0	302.6	333.3	367.9	383.3
60°	262.2	275.7	309.3	346.8	362.1
62.5°	243.0	250.7	287.2	324.7	342.0
65°	215.2	224.8	263.2	301.6	319.9
67.5°	192.1	201.7	241.1	279.5	297.8
70°	167.1	176.7	218.1	256.5	274.7
72.5°	138.3	151.8	195.0	233.4	252.6
75°	115.3	127.8	170.0	208.4	223.8
77.5°	89.3	105.7	145.0	176.7	188.3
80°	66.3	82.6	118.2	141.2	151.8
82.5°	45.1	61.5	88.4	105.7	111.4
85°	26.9	38.4	56.7	66.3	65.3
87.5°	12.5	16.3	23.1	23.1	22.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)