

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: P308917

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-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: P308917
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: 22FCZ2-24HE-UNV-L82765-S-CA08-W2A-U-3500K
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: 2261.0 lumens
Efficiency: N/A
Efficacy: 119.0 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

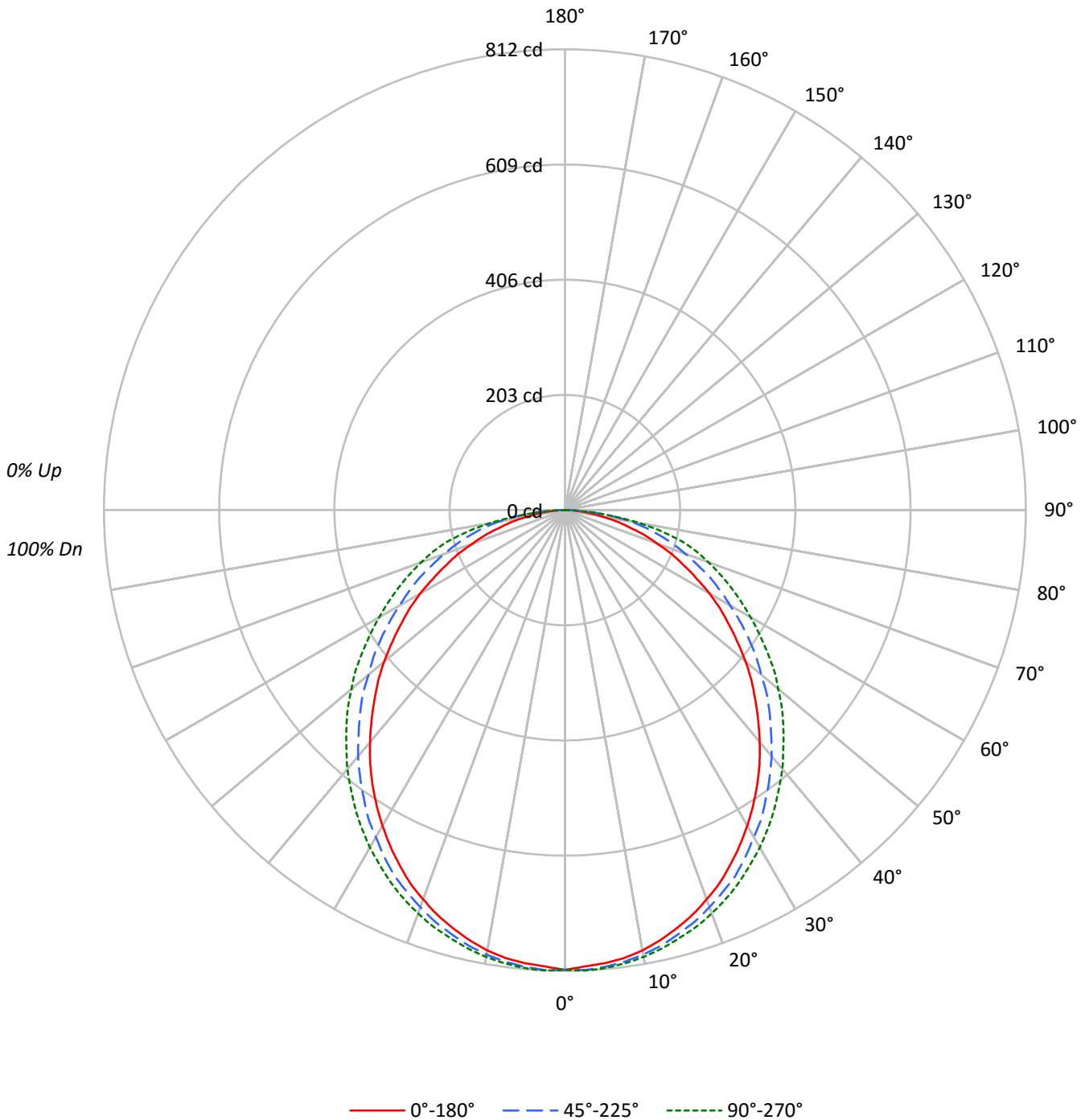
Input Watts (W): 19
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-24HE-UNV-L82765-S-CA08-W2A-U-3500K

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°	2180	2180	2180
5°	2166	2183	2189
10°	2153	2173	2185
15°	2125	2154	2175
20°	2090	2133	2166
25°	2048	2111	2152
30°	1996	2069	2134
35°	1941	2031	2114
40°	1875	1990	2094
45°	1807	1943	2071
50°	1740	1890	2053
55°	1658	1856	2039
60°	1584	1811	2033
65°	1478	1800	2055
70°	1361	1784	2116
75°	1229	1810	2227
80°	1063	1864	2092
85°	880	1562	1562



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.6	3.4
10°-20°	218.0	9.6
20°-30°	326.2	14.4
30°-40°	386.4	17.1
40°-50°	393.8	17.4
50°-60°	352.9	15.6
60°-70°	276.3	12.2
70°-80°	178.2	7.9
80°-90°	52.6	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°	620.9	27.5
0°-40°	1007.3	44.5
0°-60°	1753.9	77.6
0°-90°	2261.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2261.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	810	810	810	810	810	
5°	802	804	808	809	810	76
15°	763	767	773	780	781	215
25°	690	696	711	720	725	318
35°	591	598	618	637	644	369
45°	475	485	511	537	544	367
55°	353	365	396	423	435	317
65°	232	246	283	310	323	231
75°	118	136	174	204	214	127
85°	28	39	51	51	51	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	810.2	810.2	810.2	810.2	810.2
2.5°	804.9	807.0	811.2	812.3	812.3
5°	801.7	803.9	808.1	809.1	810.2
7.5°	796.5	797.5	802.8	804.9	806.0
10°	788.0	790.1	795.4	798.6	799.6
12.5°	776.4	779.6	785.9	790.1	791.2
15°	762.7	766.9	773.3	779.6	780.6
17.5°	747.9	752.2	760.6	768.0	770.1
20°	730.0	735.3	744.8	753.2	756.4
22.5°	712.1	716.3	727.9	738.5	741.6
25°	689.9	696.3	711.0	720.5	724.7
27.5°	666.7	674.1	688.9	701.5	705.7
30°	642.5	649.8	665.7	681.5	686.8
32.5°	617.1	625.6	644.6	660.4	665.7
35°	590.8	598.1	618.2	637.2	643.5
37.5°	563.3	569.7	592.9	612.9	619.2
40°	533.8	542.2	566.5	589.7	596.0
42.5°	504.3	513.8	538.0	563.3	569.7
45°	474.7	485.3	510.6	537.0	544.3
47.5°	446.2	454.7	483.2	508.5	519.0
50°	415.6	424.1	451.5	480.0	490.5
52.5°	384.0	395.6	425.1	452.6	465.2
55°	353.4	365.0	395.6	423.0	434.6
57.5°	324.9	334.4	366.1	394.5	406.1
60°	294.3	302.8	336.5	367.1	377.7
62.5°	261.6	274.3	309.1	337.6	350.2
65°	232.1	245.8	282.7	310.1	322.8
67.5°	204.7	217.3	253.2	282.7	296.4
70°	173.0	189.9	226.8	256.3	269.0
72.5°	147.7	162.5	200.4	230.0	243.7
75°	118.2	136.1	174.1	203.6	214.2
77.5°	93.9	111.8	147.7	170.9	176.2
80°	68.6	86.5	120.3	131.9	135.0
82.5°	46.4	63.3	86.5	89.7	90.7
85°	28.5	39.0	50.6	50.6	50.6
87.5°	13.7	15.8	17.9	16.9	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)