

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: P312926

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-S-CP125-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: P312926
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-L83050-S-CP125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 3500K 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: 2262.0 lumens
Efficiency: N/A
Efficacy: 119.7 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

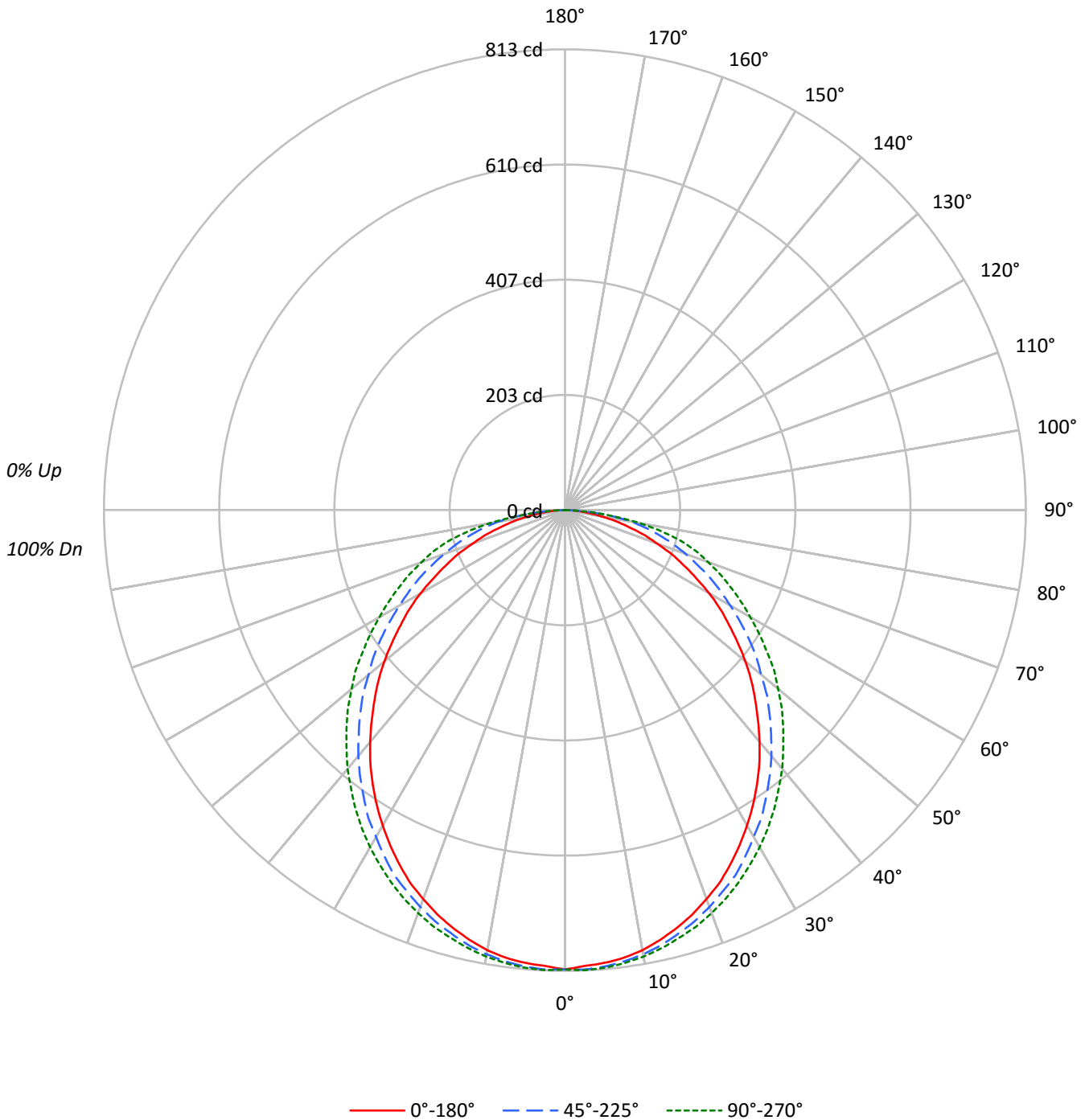
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2181	2181	2181
5°	2167	2184	2189
10°	2154	2175	2186
15°	2126	2155	2176
20°	2091	2134	2167
25°	2049	2112	2153
30°	1997	2069	2135
35°	1941	2032	2115
40°	1876	1991	2095
45°	1807	1944	2073
50°	1741	1891	2055
55°	1659	1857	2040
60°	1585	1812	2033
65°	1479	1801	2057
70°	1362	1785	2117
75°	1229	1810	2227
80°	1063	1864	2094
85°	880	1565	1565



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	3.4
10°-20°	218.1	9.6
20°-30°	326.4	14.4
30°-40°	386.5	17.1
40°-50°	393.9	17.4
50°-60°	353.1	15.6
60°-70°	276.4	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°	621.2	27.5
0°-40°	1007.7	44.5
0°-60°	1754.7	77.6
0°-90°	2262.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2262.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	810	810	810	810	810	
5°	802	804	808	810	810	76
15°	763	767	774	780	781	215
25°	690	697	711	721	725	318
35°	591	598	618	638	644	369
45°	475	486	511	537	545	367
55°	354	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°	810.5	810.5	810.5	810.5	810.5
2.5°	805.3	807.4	811.6	812.7	812.7
5°	802.1	804.2	808.4	809.5	810.5
7.5°	796.8	797.9	803.2	805.3	806.3
10°	788.4	790.5	795.8	798.9	800.0
12.5°	776.8	779.9	786.3	790.5	791.5
15°	763.1	767.3	773.6	779.9	781.0
17.5°	748.3	752.5	760.9	768.3	770.4
20°	730.3	735.6	745.1	753.6	756.7
22.5°	712.4	716.6	728.2	738.8	741.9
25°	690.2	696.6	711.3	720.8	725.1
27.5°	667.0	674.4	689.2	701.8	706.1
30°	642.7	650.1	666.0	681.8	687.1
32.5°	617.4	625.9	644.8	660.7	666.0
35°	591.0	598.4	618.5	637.5	643.8
37.5°	563.6	569.9	593.1	613.2	619.5
40°	534.0	542.5	566.7	590.0	596.3
42.5°	504.5	514.0	538.3	563.6	569.9
45°	474.9	485.5	510.8	537.2	544.6
47.5°	446.4	454.9	483.4	508.7	519.3
50°	415.8	424.3	451.7	480.2	490.8
52.5°	384.2	395.8	425.3	452.8	465.4
55°	353.6	365.2	395.8	423.2	434.8
57.5°	325.1	334.6	366.2	394.7	406.3
60°	294.5	302.9	336.7	367.3	377.8
62.5°	261.7	274.4	309.2	337.7	350.4
65°	232.2	245.9	282.8	310.3	323.0
67.5°	204.7	217.4	253.3	282.8	296.6
70°	173.1	190.0	226.9	256.5	269.1
72.5°	147.8	162.5	200.5	230.1	243.8
75°	118.2	136.1	174.1	203.7	214.2
77.5°	93.9	111.9	147.8	171.0	176.3
80°	68.6	86.5	120.3	131.9	135.1
82.5°	46.4	63.3	86.5	89.7	90.8
85°	28.5	39.0	50.7	50.7	50.7
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)