

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: P312929

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-S-CP125-W2A-U-5000K**

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: P312929
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-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 5000K 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: 2398.0 lumens
Efficiency: N/A
Efficacy: 121.1 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

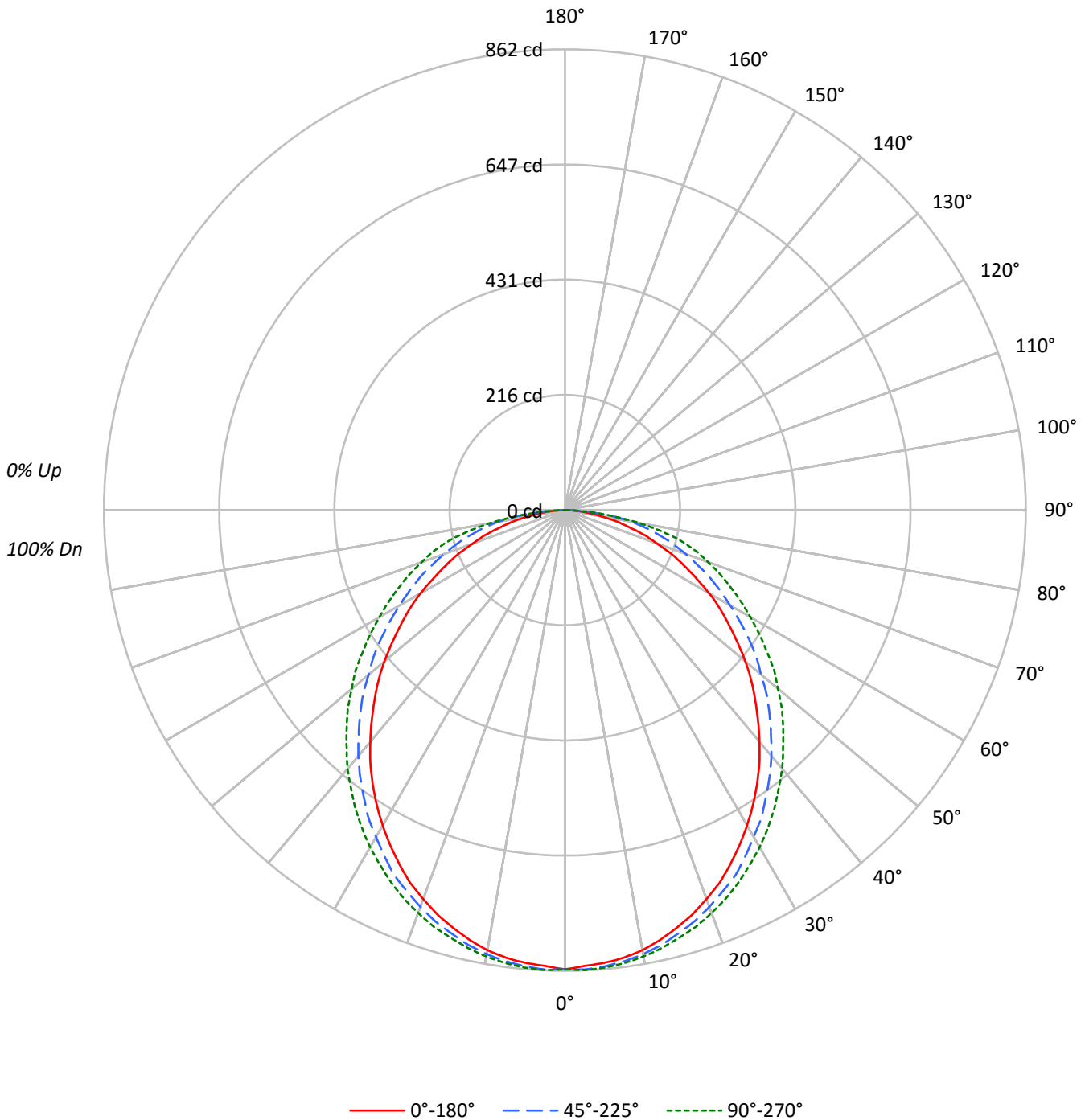
Input Watts (W): 19.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2312	2312	2312
5°	2297	2315	2321
10°	2284	2305	2317
15°	2254	2285	2307
20°	2217	2262	2297
25°	2173	2239	2282
30°	2117	2194	2263
35°	2058	2154	2242
40°	1989	2111	2221
45°	1916	2061	2197
50°	1845	2005	2178
55°	1758	1969	2163
60°	1680	1921	2155
65°	1567	1910	2180
70°	1444	1893	2245
75°	1303	1919	2361
80°	1127	1976	2219
85°	932	1658	1658



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.3	3.4
10°-20°	231.2	9.6
20°-30°	346.0	14.4
30°-40°	409.8	17.1
40°-50°	417.6	17.4
50°-60°	374.3	15.6
60°-70°	293.0	12.2
70°-80°	189.0	7.9
80°-90°	55.8	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°	658.5	27.5
0°-40°	1068.3	44.5
0°-60°	1860.2	77.6
0°-90°	2398.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2398.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	859	859	859	859	859	
5°	850	853	857	858	859	81
15°	809	813	820	827	828	228
25°	732	738	754	764	769	337
35°	627	634	656	676	682	392
45°	504	515	542	570	577	389
55°	375	387	420	449	461	336
65°	246	261	300	329	342	245
75°	125	144	185	216	227	134
85°	30	41	54	54	54	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	859.3	859.3	859.3	859.3	859.3
2.5°	853.7	855.9	860.4	861.5	861.5
5°	850.3	852.6	857.0	858.2	859.3
7.5°	844.7	845.9	851.4	853.7	854.8
10°	835.8	838.0	843.6	847.0	848.1
12.5°	823.5	826.8	833.5	838.0	839.1
15°	808.9	813.4	820.1	826.8	828.0
17.5°	793.3	797.7	806.7	814.5	816.8
20°	774.2	779.8	789.9	798.9	802.2
22.5°	755.2	759.7	772.0	783.2	786.6
25°	731.7	738.4	754.1	764.2	768.7
27.5°	707.1	714.9	730.6	744.0	748.5
30°	681.4	689.2	706.0	722.8	728.4
32.5°	654.5	663.5	683.6	700.4	706.0
35°	626.6	634.4	655.6	675.8	682.5
37.5°	597.5	604.2	628.8	650.1	656.8
40°	566.1	575.1	600.8	625.4	632.2
42.5°	534.8	544.9	570.6	597.5	604.2
45°	503.5	514.7	541.5	569.5	577.3
47.5°	473.3	482.2	512.4	539.3	550.5
50°	440.8	449.8	478.9	509.1	520.3
52.5°	407.3	419.6	450.9	480.0	493.4
55°	374.8	387.1	419.6	448.7	461.0
57.5°	344.6	354.7	388.2	418.5	430.8
60°	312.2	321.1	356.9	389.4	400.5
62.5°	277.5	290.9	327.8	358.0	371.5
65°	246.1	260.7	299.9	328.9	342.4
67.5°	217.1	230.5	268.5	299.9	314.4
70°	183.5	201.4	240.6	271.9	285.3
72.5°	156.6	172.3	212.6	243.9	258.5
75°	125.3	144.3	184.6	215.9	227.1
77.5°	99.6	118.6	156.6	181.3	186.8
80°	72.7	91.7	127.5	139.9	143.2
82.5°	49.2	67.1	91.7	95.1	96.2
85°	30.2	41.4	53.7	53.7	53.7
87.5°	14.5	16.8	19.0	17.9	17.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)