

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: P308940

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP125-W2A-U-5700K**

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: P308940
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-CP125-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 2358.0 lumens
Efficiency: N/A
Efficacy: 121.5 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

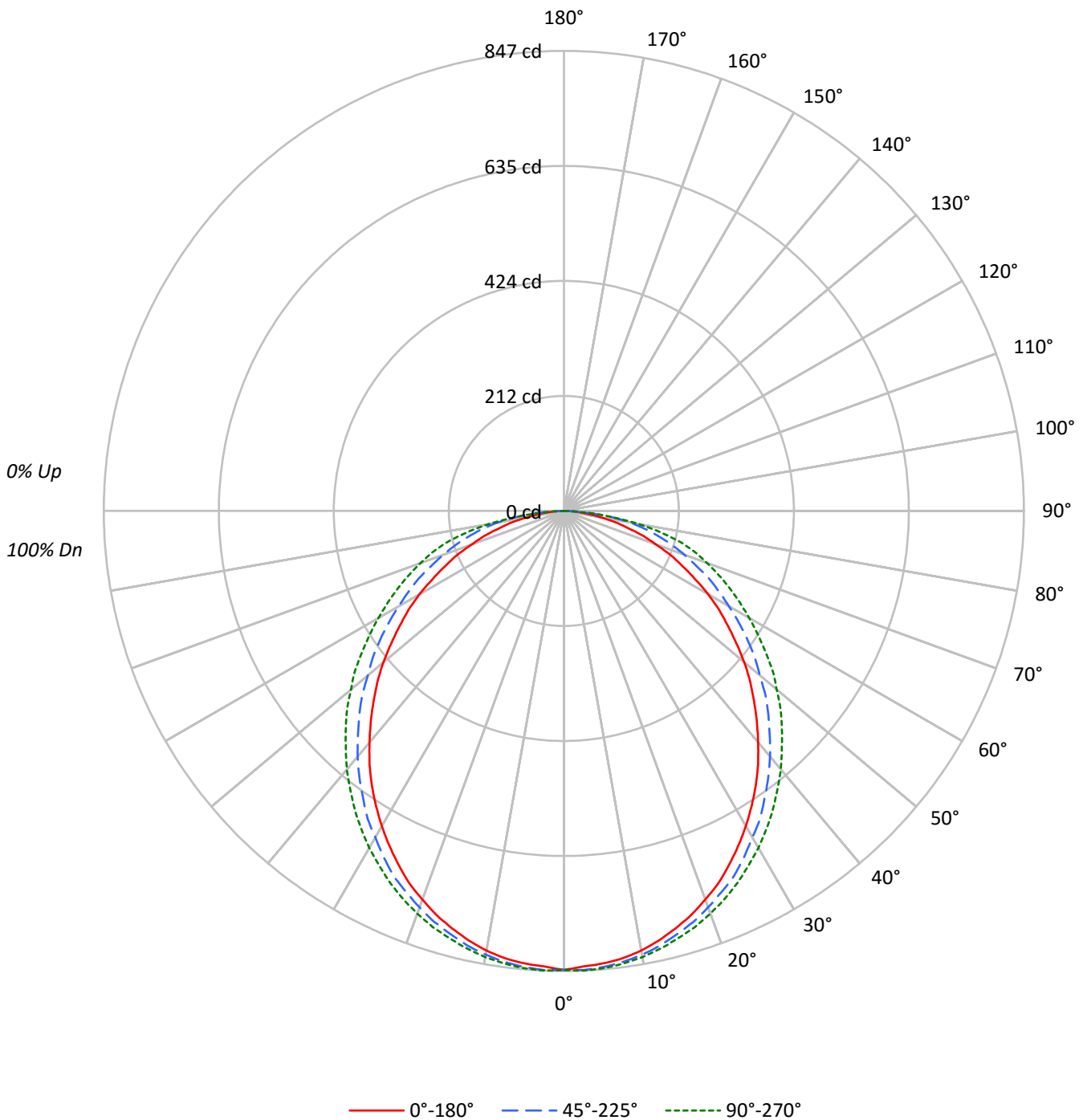
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2274	2274	2274
5°	2259	2276	2282
10°	2246	2267	2279
15°	2216	2247	2268
20°	2180	2224	2259
25°	2136	2202	2244
30°	2082	2157	2225
35°	2024	2118	2205
40°	1956	2075	2184
45°	1884	2026	2160
50°	1815	1971	2142
55°	1729	1936	2127
60°	1652	1889	2120
65°	1541	1878	2144
70°	1419	1861	2207
75°	1281	1887	2322
80°	1108	1943	2182
85°	917	1630	1630



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.9	3.4
10°-20°	227.4	9.6
20°-30°	340.2	14.4
30°-40°	402.9	17.1
40°-50°	410.6	17.4
50°-60°	368.1	15.6
60°-70°	288.2	12.2
70°-80°	185.8	7.9
80°-90°	54.9	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°	647.5	27.5
0°-40°	1050.4	44.5
0°-60°	1829.2	77.6
0°-90°	2358.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2358.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	845	845	845	845	845	
5°	836	838	843	844	845	79
15°	795	800	806	813	814	224
25°	720	726	742	751	756	331
35°	616	624	645	664	671	385
45°	495	506	532	560	568	382
55°	369	381	413	441	453	330
65°	242	256	295	324	337	240
75°	123	142	182	212	223	132
85°	30	41	53	53	53	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	844.9	844.9	844.9	844.9	844.9
2.5°	839.4	841.6	846.0	847.1	847.1
5°	836.1	838.3	842.7	843.8	844.9
7.5°	830.6	831.7	837.2	839.4	840.5
10°	821.8	824.0	829.5	832.8	833.9
12.5°	809.7	813.0	819.6	824.0	825.1
15°	795.4	799.8	806.4	813.0	814.1
17.5°	780.0	784.4	793.2	800.9	803.1
20°	761.3	766.8	776.7	785.5	788.8
22.5°	742.6	747.0	759.1	770.1	773.4
25°	719.5	726.1	741.5	751.4	755.8
27.5°	695.3	703.0	718.4	731.6	736.0
30°	670.0	677.7	694.2	710.7	716.2
32.5°	643.6	652.4	672.2	688.7	694.2
35°	616.1	623.8	644.7	664.5	671.1
37.5°	587.5	594.1	618.3	639.2	645.8
40°	556.7	565.5	590.8	615.0	621.6
42.5°	525.9	535.8	561.1	587.5	594.1
45°	495.1	506.1	532.5	560.0	567.7
47.5°	465.4	474.2	503.9	530.3	541.3
50°	433.5	442.3	470.9	500.6	511.6
52.5°	400.5	412.6	443.4	472.0	485.2
55°	368.6	380.7	412.6	441.2	453.3
57.5°	338.9	348.8	381.8	411.5	423.6
60°	307.0	315.8	351.0	382.9	393.9
62.5°	272.8	286.0	322.4	352.1	365.3
65°	242.0	256.3	294.9	323.5	336.7
67.5°	213.4	226.6	264.0	294.9	309.2
70°	180.4	198.0	236.5	267.3	280.5
72.5°	154.0	169.4	209.0	239.8	254.1
75°	123.2	141.9	181.5	212.3	223.3
77.5°	97.9	116.6	154.0	178.2	183.7
80°	71.5	90.2	125.4	137.5	140.8
82.5°	48.4	66.0	90.2	93.5	94.6
85°	29.7	40.7	52.8	52.8	52.8
87.5°	14.3	16.5	18.7	17.6	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)