

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: P308891

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CP125-W2A-U-4000K**

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: P308891
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: 22FCZ2-20HE-UNV-L82765-S-CP125-W2A-U-4000K
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: 2001.0 lumens
Efficiency: N/A
Efficacy: 118.4 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

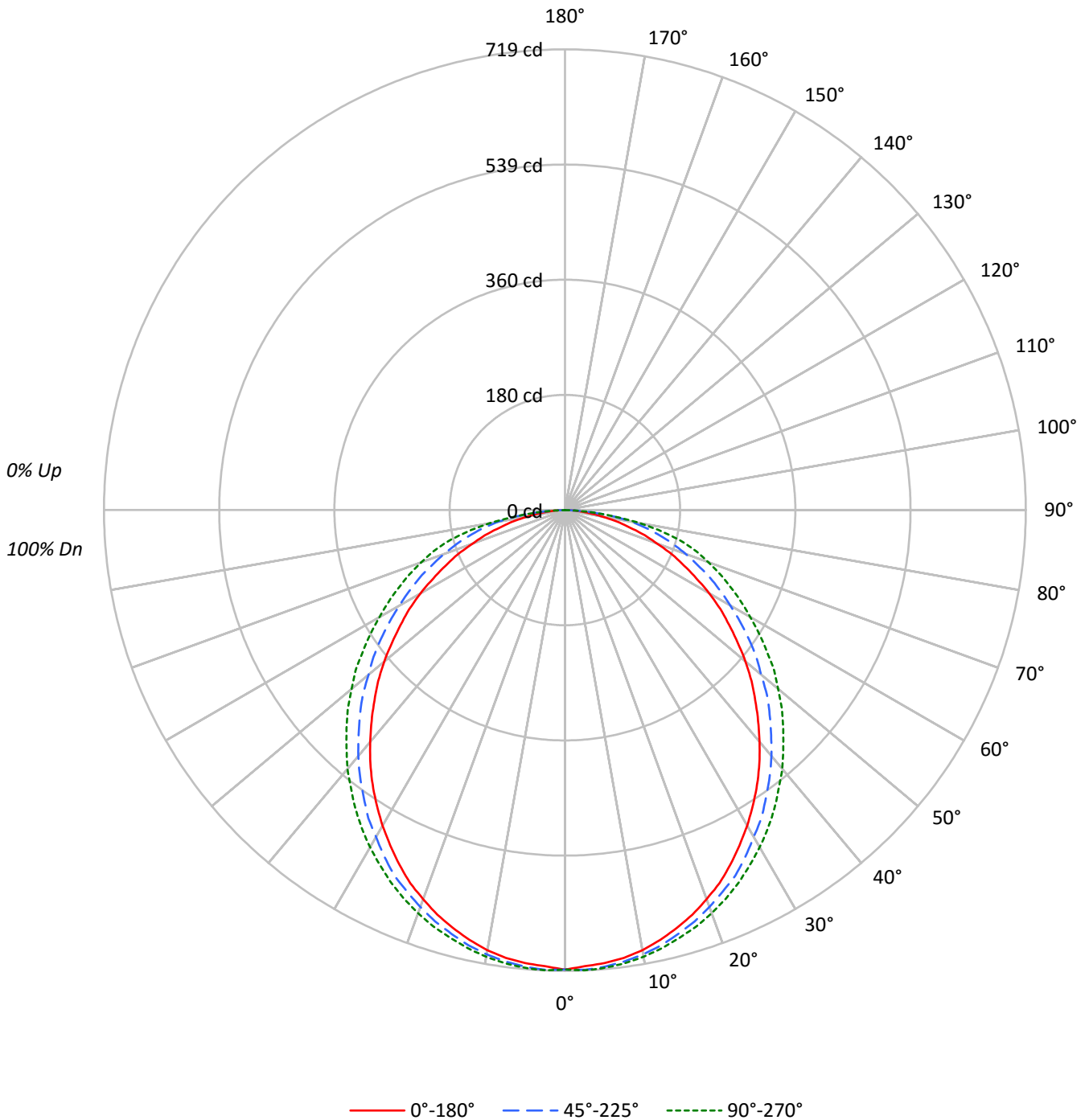
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-20HE-UNV-L82765-S-CP125-W2A-U-4000K

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°	1929	1929	1929
5°	1917	1932	1937
10°	1906	1923	1934
15°	1880	1906	1925
20°	1850	1887	1917
25°	1813	1868	1904
30°	1767	1830	1889
35°	1717	1797	1871
40°	1659	1761	1853
45°	1599	1720	1833
50°	1540	1673	1817
55°	1468	1643	1805
60°	1402	1603	1799
65°	1308	1593	1819
70°	1205	1579	1873
75°	1088	1601	1970
80°	941	1649	1852
85°	778	1383	1383



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.8	3.4
10°-20°	193.0	9.6
20°-30°	288.7	14.4
30°-40°	341.9	17.1
40°-50°	348.5	17.4
50°-60°	312.3	15.6
60°-70°	244.5	12.2
70°-80°	157.7	7.9
80°-90°	46.6	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°	549.5	27.5
0°-40°	891.4	44.5
0°-60°	1552.2	77.6
0°-90°	2001.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2001.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	717	717	717	717	717	
5°	710	711	715	716	717	67
15°	675	679	684	690	691	190
25°	611	616	629	638	641	281
35°	523	529	547	564	570	327
45°	420	430	452	475	482	324
55°	313	323	350	374	385	280
65°	205	218	250	274	286	204
75°	105	120	154	180	190	112
85°	25	34	45	45	45	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	717.0	717.0	717.0	717.0	717.0
2.5°	712.4	714.2	718.0	718.9	718.9
5°	709.6	711.4	715.2	716.1	717.0
7.5°	704.9	705.8	710.5	712.4	713.3
10°	697.4	699.3	703.9	706.8	707.7
12.5°	687.1	689.9	695.5	699.3	700.2
15°	675.0	678.7	684.3	689.9	690.9
17.5°	661.9	665.7	673.1	679.7	681.5
20°	646.1	650.7	659.1	666.6	669.4
22.5°	630.2	633.9	644.2	653.5	656.3
25°	610.6	616.2	629.3	637.7	641.4
27.5°	590.0	596.6	609.7	620.9	624.6
30°	568.6	575.1	589.1	603.1	607.8
32.5°	546.2	553.6	570.4	584.4	589.1
35°	522.8	529.4	547.1	563.9	569.5
37.5°	498.6	504.2	524.7	542.4	548.0
40°	472.4	479.9	501.4	521.9	527.5
42.5°	446.3	454.7	476.1	498.6	504.2
45°	420.1	429.5	451.9	475.2	481.7
47.5°	394.9	402.4	427.6	450.0	459.3
50°	367.8	375.3	399.6	424.8	434.1
52.5°	339.8	350.1	376.2	400.5	411.7
55°	312.8	323.0	350.1	374.4	384.7
57.5°	287.6	296.0	324.0	349.2	359.4
60°	260.5	267.9	297.8	324.9	334.2
62.5°	231.5	242.7	273.6	298.8	310.0
65°	205.4	217.5	250.2	274.5	285.7
67.5°	181.1	192.3	224.1	250.2	262.3
70°	153.1	168.1	200.7	226.9	238.1
72.5°	130.7	143.8	177.4	203.5	215.7
75°	104.6	120.4	154.0	180.2	189.5
77.5°	83.1	99.0	130.7	151.2	155.9
80°	60.7	76.6	106.4	116.7	119.5
82.5°	41.1	56.0	76.6	79.4	80.3
85°	25.2	34.5	44.8	44.8	44.8
87.5°	12.1	14.0	15.9	14.9	14.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)