

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: P308890

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-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: P308890
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-3500K
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: 1958.0 lumens
Efficiency: N/A
Efficacy: 116.5 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

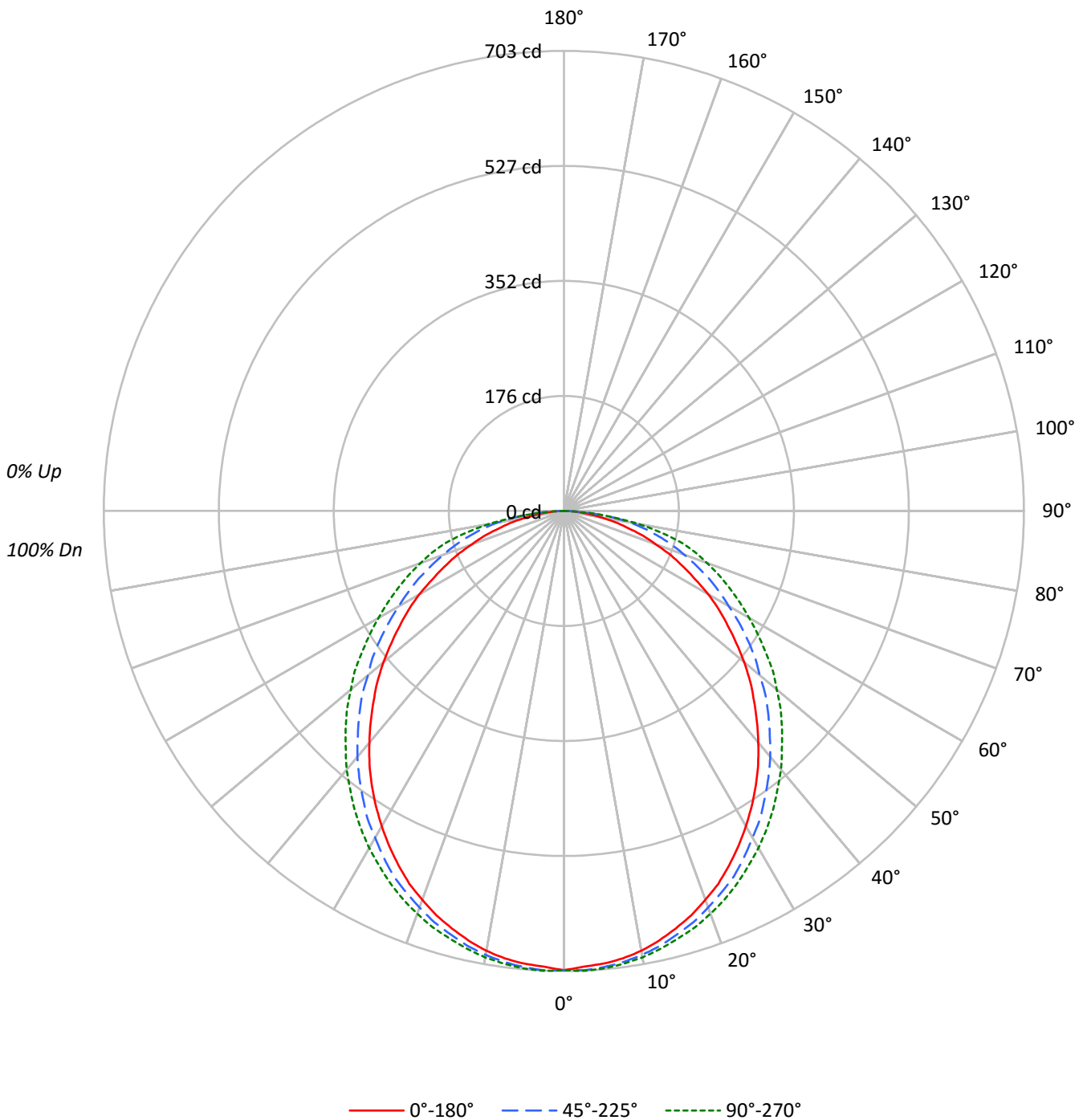
Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1888	1888	1888
5°	1875	1890	1895
10°	1865	1882	1892
15°	1840	1865	1883
20°	1810	1847	1876
25°	1774	1828	1863
30°	1729	1791	1848
35°	1681	1759	1831
40°	1624	1723	1813
45°	1564	1683	1794
50°	1507	1637	1778
55°	1436	1607	1766
60°	1372	1568	1760
65°	1280	1559	1780
70°	1179	1545	1833
75°	1064	1567	1929
80°	921	1613	1812
85°	763	1355	1355



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.3	3.4
10°-20°	188.8	9.6
20°-30°	282.5	14.4
30°-40°	334.6	17.1
40°-50°	341.0	17.4
50°-60°	305.6	15.6
60°-70°	239.3	12.2
70°-80°	154.3	7.9
80°-90°	45.6	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°	537.7	27.5
0°-40°	872.3	44.5
0°-60°	1518.9	77.6
0°-90°	1958.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1958.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	694	696	700	701	702	66
15°	660	664	670	675	676	186
25°	598	603	616	624	628	275
35°	512	518	535	552	557	320
45°	411	420	442	465	471	317
55°	306	316	343	366	376	274
65°	201	213	245	269	280	200
75°	102	118	151	176	186	110
85°	25	34	44	44	44	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	701.6	701.6	701.6	701.6	701.6
2.5°	697.0	698.9	702.5	703.4	703.4
5°	694.3	696.1	699.8	700.7	701.6
7.5°	689.7	690.6	695.2	697.0	698.0
10°	682.4	684.3	688.8	691.6	692.5
12.5°	672.4	675.1	680.6	684.3	685.2
15°	660.5	664.2	669.6	675.1	676.0
17.5°	647.7	651.4	658.7	665.1	666.9
20°	632.2	636.7	645.0	652.3	655.0
22.5°	616.7	620.3	630.4	639.5	642.2
25°	597.5	602.9	615.7	624.0	627.6
27.5°	577.4	583.8	596.6	607.5	611.2
30°	556.4	562.8	576.5	590.2	594.7
32.5°	534.4	541.7	558.2	571.9	576.5
35°	511.6	518.0	535.3	551.8	557.3
37.5°	487.8	493.3	513.4	530.8	536.3
40°	462.3	469.6	490.6	510.7	516.2
42.5°	436.7	444.9	465.9	487.8	493.3
45°	411.1	420.2	442.2	465.0	471.4
47.5°	386.4	393.7	418.4	440.3	449.5
50°	359.9	367.3	391.0	415.7	424.8
52.5°	332.5	342.6	368.2	391.9	402.9
55°	306.0	316.1	342.6	366.3	376.4
57.5°	281.4	289.6	317.0	341.7	351.7
60°	254.9	262.2	291.4	317.9	327.1
62.5°	226.6	237.5	267.7	292.3	303.3
65°	201.0	212.9	244.8	268.6	279.5
67.5°	177.2	188.2	219.3	244.8	256.7
70°	149.8	164.4	196.4	222.0	233.0
72.5°	127.9	140.7	173.6	199.2	211.0
75°	102.3	117.8	150.7	176.3	185.5
77.5°	81.3	96.8	127.9	148.0	152.6
80°	59.4	74.9	104.1	114.2	116.9
82.5°	40.2	54.8	74.9	77.7	78.6
85°	24.7	33.8	43.9	43.9	43.9
87.5°	11.9	13.7	15.5	14.6	14.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)