

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: P308616

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CA125-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: P308616
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CA125-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 2021.0 lumens
Efficiency: N/A
Efficacy: 117.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

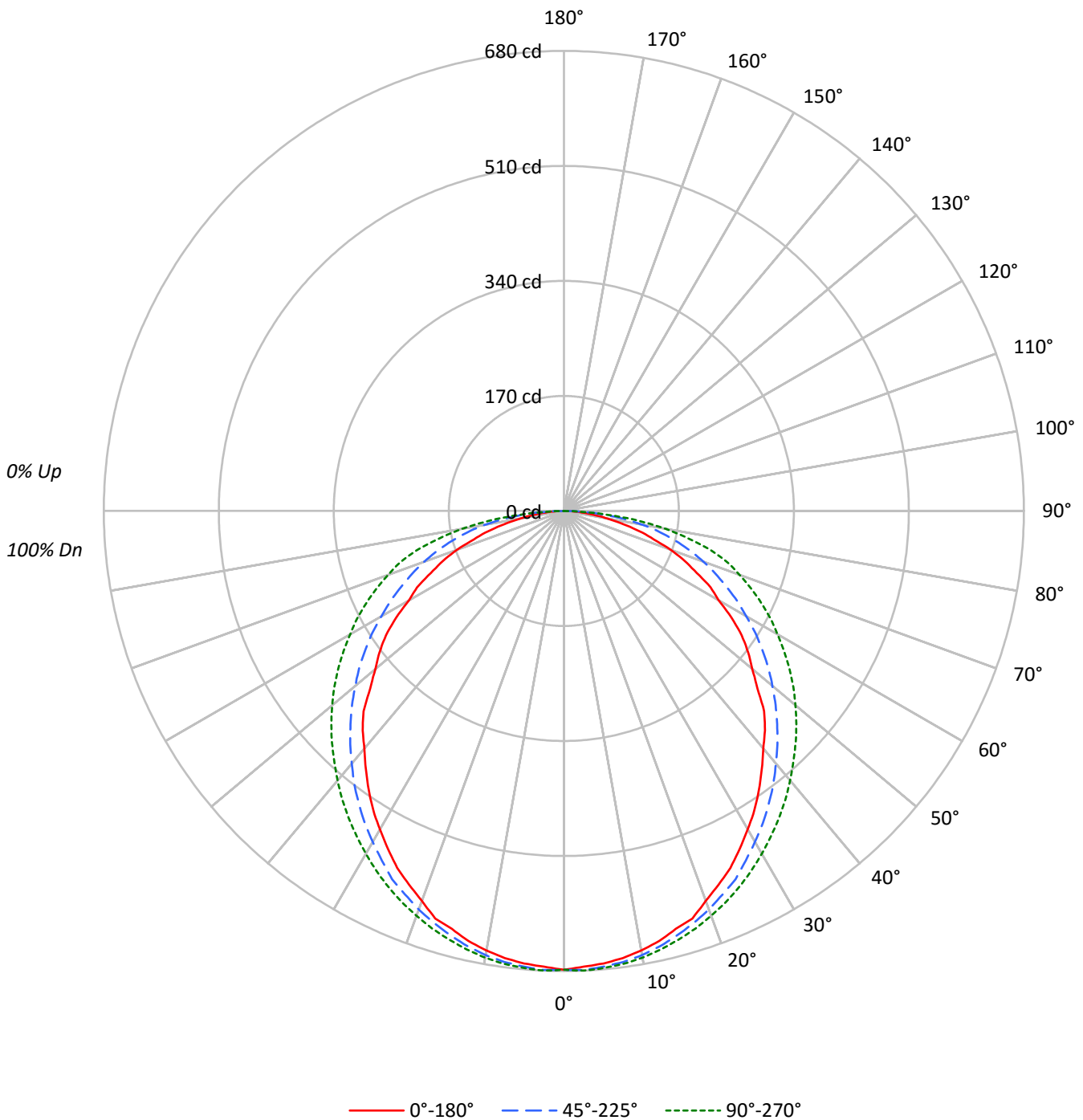
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1825	1825	1825
5°	1813	1826	1832
10°	1803	1821	1832
15°	1781	1808	1827
20°	1756	1795	1823
25°	1729	1784	1821
30°	1689	1755	1818
35°	1652	1735	1821
40°	1611	1713	1828
45°	1594	1697	1844
50°	1523	1685	1871
55°	1506	1679	1910
60°	1421	1676	1963
65°	1380	1687	2051
70°	1324	1728	2176
75°	1207	1780	2344
80°	1034	1844	2368
85°	837	1763	2032



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.2	3.2
10°-20°	183.0	9.1
20°-30°	275.5	13.6
30°-40°	330.6	16.4
40°-50°	345.6	17.1
50°-60°	322.0	15.9
60°-70°	264.1	13.1
70°-80°	178.0	8.8
80°-90°	58.0	2.9
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°	522.7	25.9
0°-40°	853.3	42.2
0°-60°	1520.9	75.3
0°-90°	2021.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2021.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	678	678	678	678	678	
5°	671	673	676	677	678	64
15°	639	643	649	655	656	181
25°	582	586	601	609	613	268
35°	503	510	528	546	554	314
45°	419	422	446	473	485	320
55°	321	327	358	392	407	285
65°	217	226	265	304	322	216
75°	116	129	171	210	225	122
85°	27	39	57	67	66	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	678.1	678.1	678.1	678.1	678.1
2.5°	674.2	676.1	679.0	680.0	680.0
5°	671.3	673.2	676.1	677.1	678.1
7.5°	666.5	668.4	672.3	674.2	675.2
10°	659.7	661.6	666.5	669.4	670.3
12.5°	651.0	652.9	658.7	662.6	663.6
15°	639.4	643.2	649.0	654.8	655.8
17.5°	631.6	630.7	638.4	645.2	647.1
20°	613.3	618.1	626.8	634.5	636.5
22.5°	597.8	601.6	613.3	622.0	625.8
25°	582.3	586.2	600.7	609.4	613.3
27.5°	563.0	568.8	582.3	594.9	599.7
30°	543.6	549.4	564.9	579.4	585.2
32.5°	524.3	531.0	547.5	563.0	569.7
35°	503.0	509.8	528.1	546.5	554.3
37.5°	480.7	489.4	508.8	529.1	537.8
40°	458.5	467.2	487.5	510.7	520.4
42.5°	440.1	444.0	467.2	492.3	502.0
45°	418.8	421.7	445.9	473.0	484.6
47.5°	387.9	398.5	424.6	454.6	466.2
50°	363.7	375.3	402.4	434.3	446.9
52.5°	343.4	351.1	381.1	413.0	427.5
55°	321.1	326.9	357.9	391.7	407.2
57.5°	294.1	304.7	335.6	370.5	385.9
60°	264.1	277.6	311.5	349.2	364.7
62.5°	244.7	252.5	289.2	326.9	344.4
65°	216.7	226.3	265.0	303.7	322.1
67.5°	193.5	203.1	242.8	281.5	299.9
70°	168.3	178.0	219.6	258.3	276.6
72.5°	139.3	152.8	196.4	235.0	254.4
75°	116.1	128.6	171.2	209.9	225.4
77.5°	90.0	106.4	146.1	178.0	189.6
80°	66.7	83.2	119.0	142.2	152.8
82.5°	45.5	61.9	89.0	106.4	112.2
85°	27.1	38.7	57.1	66.7	65.8
87.5°	12.6	16.4	23.2	23.2	22.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)