

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: P308901

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CP187-W2A-U-4500K**

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: P308901
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-CP187-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" 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: 1950.0 lumens
Efficiency: N/A
Efficacy: 114.7 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

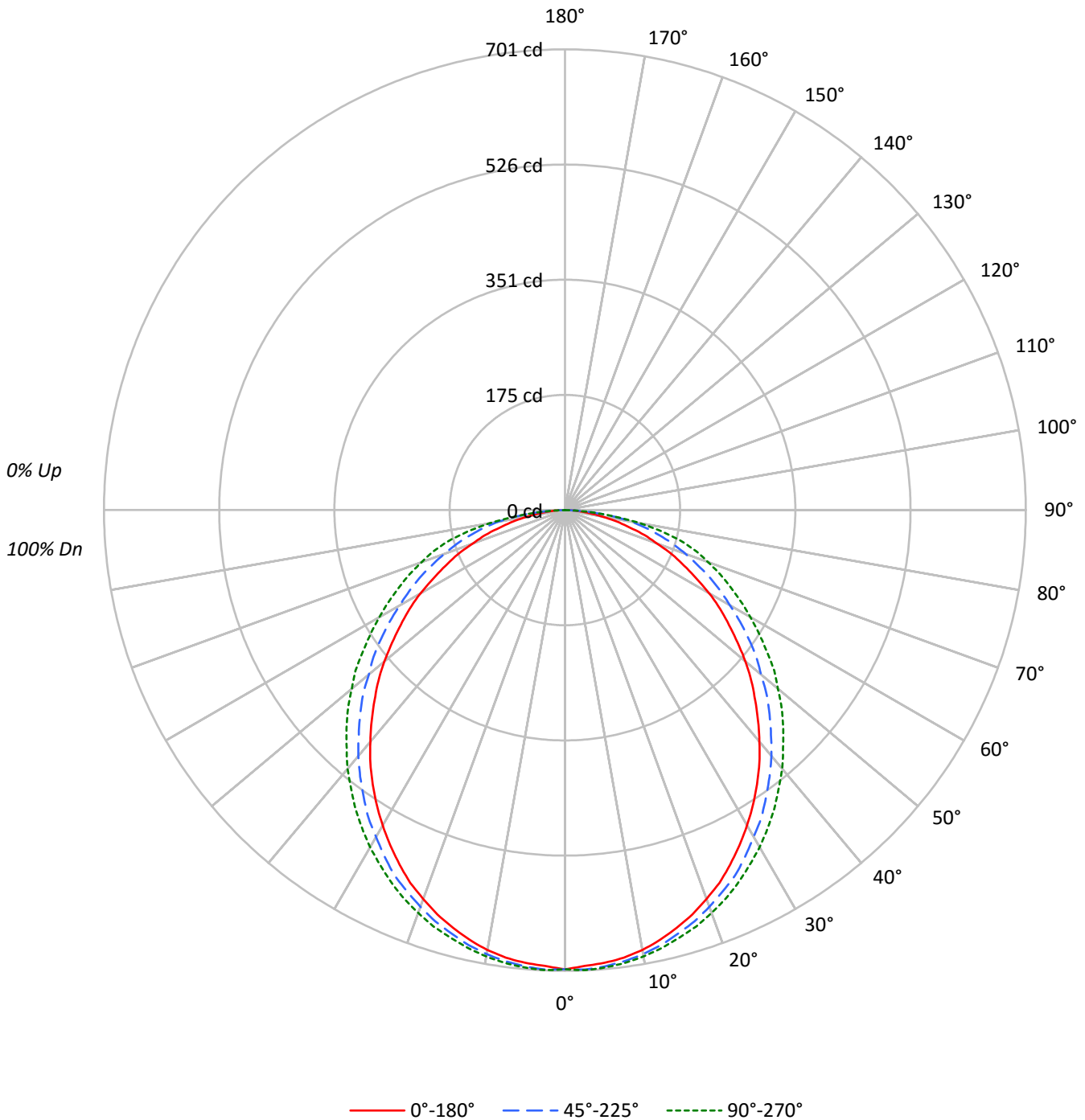
Input Watts (W): 17
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-20HE-UNV-L82765-S-CP187-W2A-U-4500K

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	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					100			
1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49					49			
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43					43			
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37					37			
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33					33			
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30					30			
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27					27			
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1880	1880	1880
5°	1868	1883	1887
10°	1857	1874	1884
15°	1833	1858	1876
20°	1803	1839	1868
25°	1767	1821	1856
30°	1722	1784	1840
35°	1674	1752	1823
40°	1617	1716	1806
45°	1558	1676	1787
50°	1501	1630	1771
55°	1430	1601	1758
60°	1366	1562	1753
65°	1275	1552	1773
70°	1174	1539	1825
75°	1059	1561	1920
80°	916	1607	1805
85°	760	1349	1349



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.1	3.4
10°-20°	188.1	9.6
20°-30°	281.4	14.4
30°-40°	333.2	17.1
40°-50°	339.6	17.4
50°-60°	304.4	15.6
60°-70°	238.3	12.2
70°-80°	153.7	7.9
80°-90°	45.4	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°	535.5	27.5
0°-40°	868.7	44.5
0°-60°	1512.7	77.6
0°-90°	1950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	699	699	699	699	699	
5°	692	693	697	698	699	66
15°	658	661	667	672	673	185
25°	595	600	613	621	625	274
35°	510	516	533	550	555	318
45°	409	418	440	463	470	316
55°	305	315	341	365	375	273
65°	200	212	244	268	278	199
75°	102	117	150	176	185	109
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°	698.7	698.7	698.7	698.7	698.7
2.5°	694.2	696.0	699.7	700.6	700.6
5°	691.5	693.3	696.9	697.8	698.7
7.5°	686.9	687.8	692.4	694.2	695.1
10°	679.6	681.5	686.0	688.7	689.6
12.5°	669.6	672.4	677.8	681.5	682.4
15°	657.8	661.4	666.9	672.4	673.3
17.5°	645.1	648.7	656.0	662.4	664.2
20°	629.6	634.1	642.3	649.6	652.3
22.5°	614.1	617.8	627.8	636.9	639.6
25°	595.0	600.5	613.2	621.4	625.0
27.5°	575.0	581.4	594.1	605.0	608.7
30°	554.1	560.5	574.1	587.7	592.3
32.5°	532.2	539.5	555.9	569.6	574.1
35°	509.5	515.9	533.2	549.5	555.0
37.5°	485.8	491.3	511.3	528.6	534.1
40°	460.4	467.7	488.6	508.6	514.1
42.5°	434.9	443.1	464.0	485.8	491.3
45°	409.4	418.5	440.4	463.1	469.5
47.5°	384.9	392.1	416.7	438.5	447.6
50°	358.5	365.7	389.4	414.0	423.1
52.5°	331.2	341.2	366.7	390.3	401.2
55°	304.8	314.8	341.2	364.8	374.8
57.5°	280.2	288.4	315.7	340.3	350.3
60°	253.8	261.1	290.2	316.6	325.7
62.5°	225.6	236.6	266.6	291.1	302.1
65°	200.2	212.0	243.8	267.5	278.4
67.5°	176.5	187.4	218.4	243.8	255.7
70°	149.2	163.8	195.6	221.1	232.0
72.5°	127.4	140.1	172.9	198.3	210.2
75°	101.9	117.4	150.1	175.6	184.7
77.5°	81.0	96.4	127.4	147.4	151.9
80°	59.1	74.6	103.7	113.7	116.5
82.5°	40.0	54.6	74.6	77.3	78.2
85°	24.6	33.7	43.7	43.7	43.7
87.5°	11.8	13.6	15.5	14.6	14.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)