

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: P308358

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-RDP-CP187-W2A-U-3000K**

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: P308358  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
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-RDP-CP187-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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**

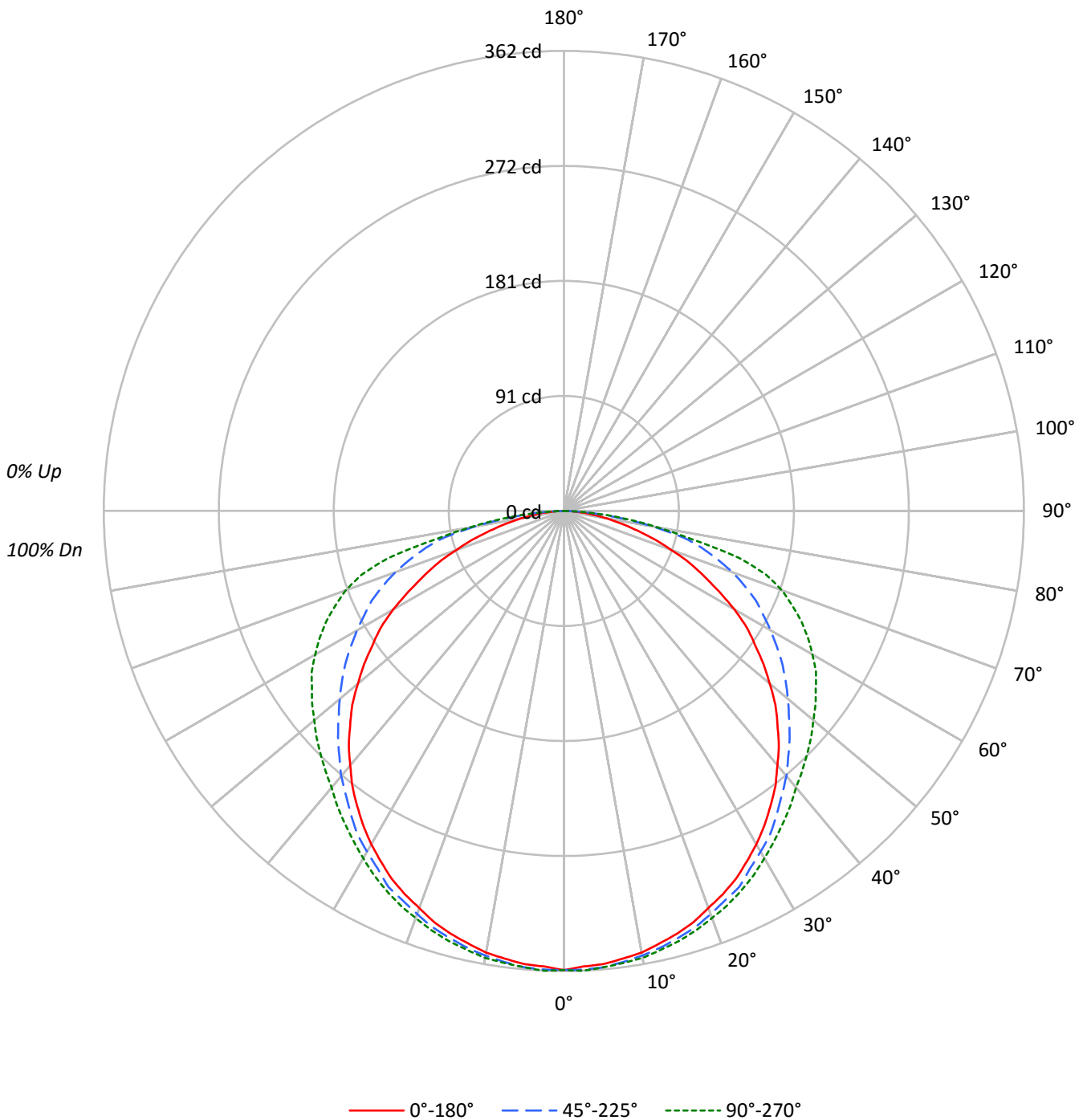
Lumens per Lamp: N/A  
Luminaire Lumens: 1150.0 lumens  
Efficiency: N/A  
Efficacy: 69.3 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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



TEST NUMBER: P308358

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-RDP-CP187-W2A-U-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P308358

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-RDP-CP187-W2A-U-3000K

**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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	972	972	972
5°	967	974	974
10°	964	971	975
15°	959	969	976
20°	952	966	976
25°	950	969	980
30°	941	962	981
35°	931	959	987
40°	918	957	999
45°	905	956	1030
50°	885	963	1073
55°	861	984	1135
60°	833	1011	1216
65°	776	1061	1314
70°	712	1112	1437
75°	625	1170	1487
80°	538	1114	1167
85°	469	809	889



TEST NUMBER: P308358

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-RDP-CP187-W2A-U-3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.2	3.0
10°-20°	98.1	8.5
20°-30°	149.7	13.0
30°-40°	182.8	15.9
40°-50°	195.4	17.0
50°-60°	188.6	16.4
60°-70°	162.4	14.1
70°-80°	109.9	9.6
80°-90°	29.0	2.5
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°	282.0	24.5
0°-40°	464.7	40.4
0°-60°	848.8	73.8
0°-90°	1150.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1150.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	361	361	361	361	361	
5°	358	359	360	360	360	34
15°	344	345	348	349	350	97
25°	320	322	326	328	330	147
35°	283	286	292	298	300	177
45°	238	242	251	264	271	183
55°	184	190	210	231	242	165
65°	122	134	167	193	206	121
75°	60	80	112	135	143	64
85°	15	21	26	27	29	17
90°	0	0	0	0	0	



TEST NUMBER: P308358

CATALOG NUMBER: 22FC22-20HE-UNV-L82765-RDP-CP187-W2A-U-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	361.2	361.2	361.2	361.2	361.2
2.5°	358.7	359.5	361.2	361.2	362.1
5°	357.9	358.7	360.4	360.4	360.4
7.5°	355.3	356.2	357.9	358.7	358.7
10°	352.8	353.6	355.3	356.2	357.0
12.5°	348.5	349.4	351.9	353.6	353.6
15°	344.3	345.2	347.7	349.4	350.2
17.5°	339.2	340.9	343.5	345.2	346.0
20°	332.5	334.2	337.5	340.1	340.9
22.5°	326.5	328.2	331.6	334.2	335.9
25°	319.8	321.5	326.5	328.2	329.9
27.5°	311.3	313.0	317.2	320.6	323.2
30°	302.9	304.6	309.6	313.9	315.6
32.5°	293.6	296.1	302.0	305.4	307.9
35°	283.4	285.9	291.9	297.8	300.3
37.5°	273.3	275.8	281.7	289.3	292.7
40°	261.4	264.8	272.4	282.6	284.3
42.5°	250.4	254.6	261.4	273.3	277.5
45°	237.7	242.0	251.3	263.9	270.7
47.5°	225.9	230.1	240.3	255.5	263.9
50°	211.5	217.4	230.1	247.9	256.3
52.5°	198.0	203.0	220.0	239.4	249.6
55°	183.6	189.5	209.8	231.0	242.0
57.5°	170.9	176.0	198.8	222.5	235.2
60°	154.8	161.6	187.8	213.2	225.9
62.5°	137.9	148.0	176.8	203.0	216.6
65°	121.8	133.7	166.7	192.9	206.4
67.5°	107.4	120.1	154.0	181.9	194.6
70°	90.5	106.6	141.3	168.4	182.7
72.5°	75.3	93.1	126.9	154.0	166.7
75°	60.1	79.5	112.5	135.4	143.0
77.5°	46.5	65.1	96.4	103.2	104.1
80°	34.7	51.6	71.9	72.8	75.3
82.5°	23.7	36.4	46.5	50.8	51.6
85°	15.2	21.1	26.2	27.1	28.8
87.5°	6.8	7.6	9.3	8.5	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)