

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: P308364

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-RDP-CP187-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: P308364
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-5700K
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: 1270.0 lumens
Efficiency: N/A
Efficacy: 73.8 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

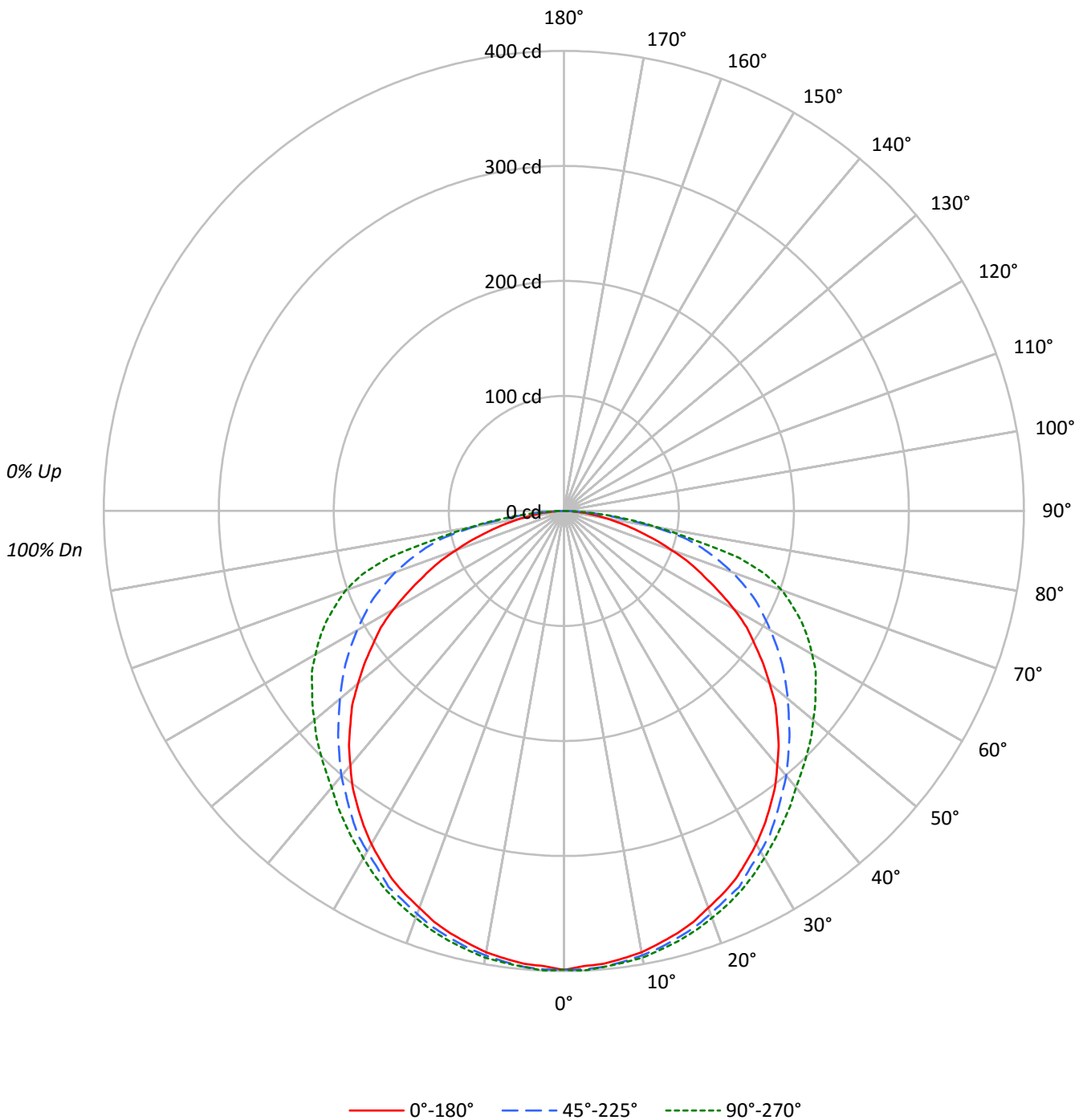
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1073	1073	1073
5°	1068	1075	1075
10°	1065	1072	1077
15°	1059	1070	1078
20°	1052	1068	1078
25°	1049	1071	1082
30°	1039	1062	1083
35°	1028	1059	1090
40°	1014	1057	1103
45°	999	1056	1138
50°	978	1064	1185
55°	951	1087	1254
60°	920	1116	1342
65°	856	1172	1452
70°	787	1227	1588
75°	689	1292	1642
80°	594	1230	1288
85°	519	895	982



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.7	3.0
10°-20°	108.3	8.5
20°-30°	165.3	13.0
30°-40°	201.8	15.9
40°-50°	215.8	17.0
50°-60°	208.3	16.4
60°-70°	179.3	14.1
70°-80°	121.3	9.6
80°-90°	32.0	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°	311.4	24.5
0°-40°	513.2	40.4
0°-60°	937.3	73.8
0°-90°	1270.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1270.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	399	399	399	399	399	
5°	395	396	398	398	398	38
15°	380	381	384	386	387	107
25°	353	355	361	362	364	163
35°	313	316	322	329	332	196
45°	262	267	278	292	299	203
55°	203	209	232	255	267	182
65°	134	148	184	213	228	134
75°	66	88	124	150	158	71
85°	17	23	29	30	32	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	398.9	398.9	398.9	398.9	398.9
2.5°	396.1	397.1	398.9	398.9	399.9
5°	395.2	396.1	398.0	398.0	398.0
7.5°	392.4	393.3	395.2	396.1	396.1
10°	389.6	390.5	392.4	393.3	394.3
12.5°	384.9	385.8	388.7	390.5	390.5
15°	380.2	381.2	384.0	385.8	386.8
17.5°	374.6	376.5	379.3	381.2	382.1
20°	367.2	369.0	372.8	375.6	376.5
22.5°	360.6	362.5	366.2	369.0	370.9
25°	353.2	355.0	360.6	362.5	364.4
27.5°	343.8	345.7	350.3	354.1	356.9
30°	334.5	336.3	341.9	346.6	348.5
32.5°	324.2	327.0	333.5	337.3	340.1
35°	313.0	315.8	322.3	328.9	331.7
37.5°	301.8	304.6	311.1	319.5	323.3
40°	288.7	292.4	300.8	312.0	313.9
42.5°	276.5	281.2	288.7	301.8	306.4
45°	262.5	267.2	277.5	291.5	299.0
47.5°	249.4	254.1	265.3	282.1	291.5
50°	233.6	240.1	254.1	273.7	283.1
52.5°	218.6	224.2	242.9	264.4	275.6
55°	202.7	209.3	231.7	255.1	267.2
57.5°	188.7	194.3	219.6	245.7	259.7
60°	171.0	178.4	207.4	235.4	249.4
62.5°	152.3	163.5	195.3	224.2	239.2
65°	134.5	147.6	184.0	213.0	228.0
67.5°	118.7	132.7	170.0	200.9	214.9
70°	100.0	117.7	156.0	185.9	201.8
72.5°	83.1	102.8	140.1	170.0	184.0
75°	66.3	87.8	124.3	149.5	157.9
77.5°	51.4	71.9	106.5	114.0	114.9
80°	38.3	57.0	79.4	80.3	83.1
82.5°	26.2	40.2	51.4	56.1	57.0
85°	16.8	23.4	29.0	29.9	31.8
87.5°	7.5	8.4	10.3	9.3	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)