

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: P308089

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP187-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: P308089  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
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-HRP-CP187-W2A-U-3500K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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**

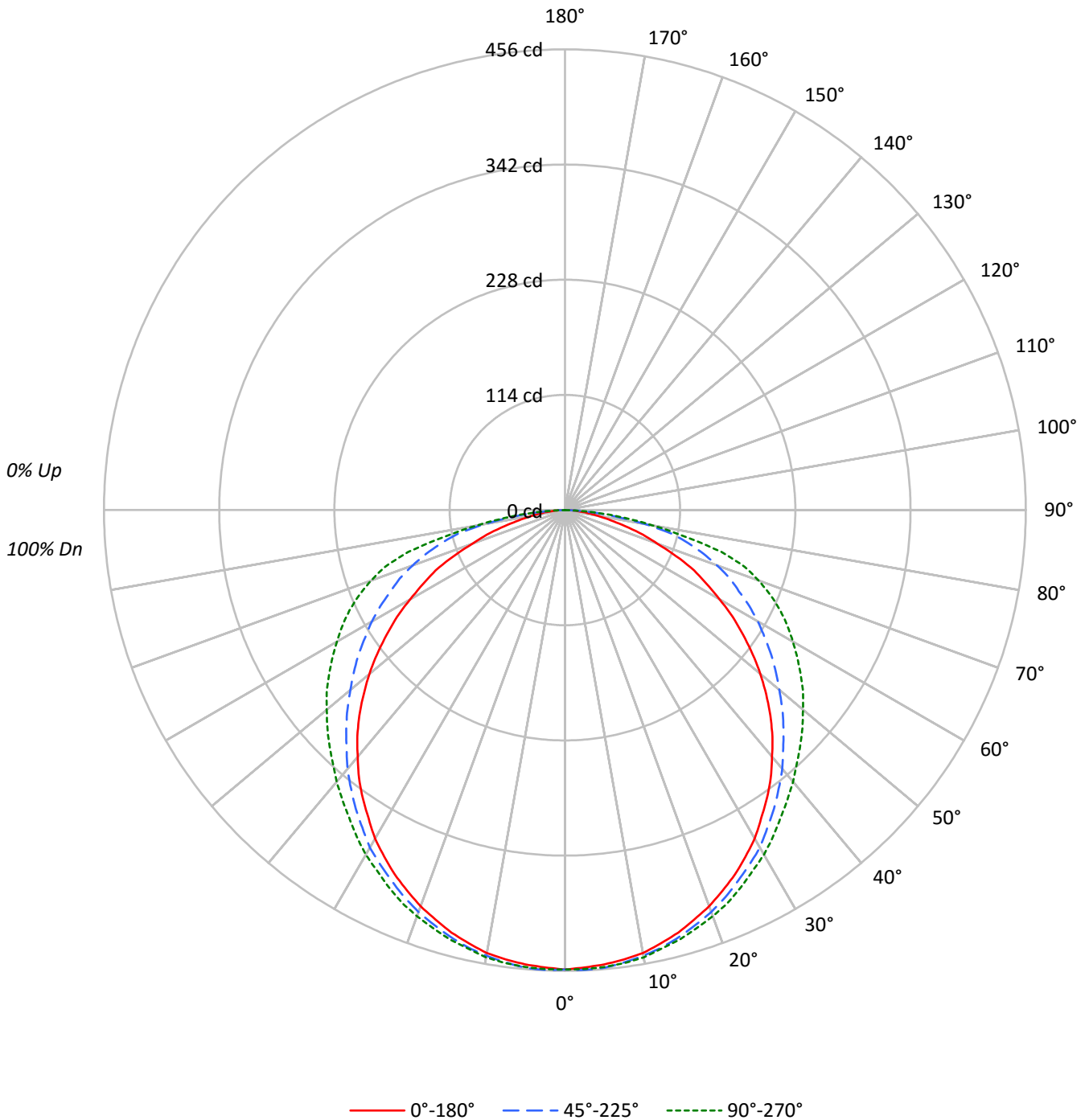
Lumens per Lamp: N/A  
Luminaire Lumens: 1381.0 lumens  
Efficiency: N/A  
Efficacy: 82.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

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

	0°	45°	90°
0°	1224	1224	1224
5°	1219	1228	1226
10°	1217	1224	1228
15°	1206	1218	1226
20°	1195	1212	1225
25°	1182	1203	1224
30°	1167	1199	1224
35°	1145	1185	1222
40°	1120	1175	1233
45°	1094	1164	1253
50°	1057	1160	1287
55°	1010	1169	1337
60°	952	1186	1402
65°	898	1209	1498
70°	768	1261	1604
75°	644	1313	1667
80°	527	1269	1390
85°	457	942	1022



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.1	3.1
10°-20°	123.3	8.9
20°-30°	186.8	13.5
30°-40°	225.6	16.3
40°-50°	237.1	17.2
50°-60°	223.1	16.2
60°-70°	186.0	13.5
70°-80°	123.2	8.9
80°-90°	32.8	2.4
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°	353.2	25.6
0°-40°	578.8	41.9
0°-60°	1038.9	75.2
0°-90°	1381.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1381.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	455	455	455	455	455	
5°	451	452	455	455	454	43
15°	433	435	437	439	440	122
25°	398	401	405	410	412	183
35°	348	352	361	368	372	218
45°	288	292	306	322	329	221
55°	215	225	249	274	285	192
65°	141	153	190	221	235	137
75°	62	86	126	152	160	67
85°	15	23	30	33	33	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	454.7	454.7	454.7	454.7	454.7
2.5°	453.0	453.9	455.6	455.6	454.7
5°	451.3	452.1	454.7	454.7	453.9
7.5°	448.6	449.5	451.3	453.0	452.1
10°	445.2	446.0	447.8	449.5	449.5
12.5°	439.1	439.9	443.4	444.3	444.3
15°	433.0	434.7	437.3	439.1	439.9
17.5°	425.1	426.9	430.4	433.8	433.8
20°	417.3	419.0	423.4	426.9	427.7
22.5°	407.7	410.3	414.7	419.0	420.8
25°	398.1	400.7	405.1	410.3	412.1
27.5°	386.8	389.4	395.5	401.6	402.5
30°	375.5	378.1	385.9	391.2	393.8
32.5°	361.5	365.0	372.9	380.7	383.3
35°	348.5	352.0	360.7	368.5	372.0
37.5°	334.5	338.0	347.6	357.2	361.5
40°	318.8	323.2	334.5	345.0	351.1
42.5°	304.0	308.4	319.7	333.7	339.8
45°	287.5	291.8	305.8	321.5	329.3
47.5°	270.1	275.3	291.8	311.0	318.8
50°	252.6	258.7	277.0	298.8	307.5
52.5°	234.3	242.2	263.1	286.6	297.1
55°	215.2	224.8	249.2	274.4	284.9
57.5°	196.9	205.6	234.3	261.3	272.7
60°	176.8	188.2	220.4	248.3	260.5
62.5°	157.7	169.9	205.6	235.2	248.3
65°	141.1	153.3	189.9	221.3	235.2
67.5°	119.3	135.9	176.8	206.5	220.4
70°	97.6	120.2	160.3	190.8	203.9
72.5°	81.0	102.8	143.7	174.2	186.4
75°	61.9	86.2	126.3	152.5	160.3
77.5°	46.2	71.4	108.0	121.1	122.0
80°	34.0	54.9	81.9	86.2	89.7
82.5°	23.5	38.3	53.1	58.4	60.1
85°	14.8	22.7	30.5	33.1	33.1
87.5°	7.8	8.7	10.5	10.5	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)