

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: P308062

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CA08-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: P308062  
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-CA08-W2A-U-3500K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" 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**

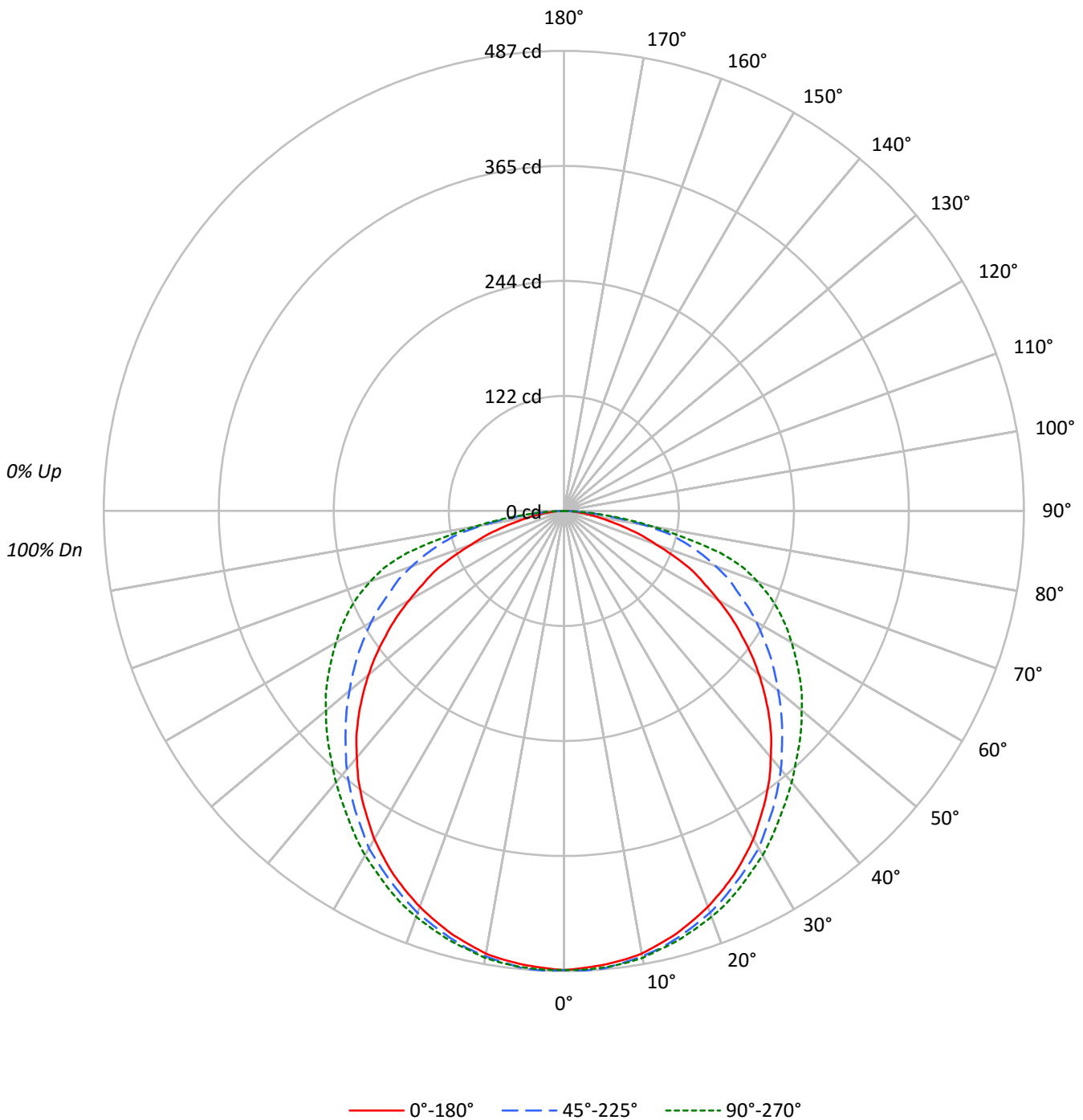
Lumens per Lamp: N/A  
Luminaire Lumens: 1476.0 lumens  
Efficiency: N/A  
Efficacy: 87.9 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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



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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°	1308	1308	1308
5°	1303	1313	1310
10°	1300	1308	1313
15°	1289	1302	1310
20°	1277	1296	1309
25°	1263	1286	1308
30°	1247	1282	1308
35°	1223	1266	1306
40°	1197	1256	1318
45°	1169	1244	1340
50°	1130	1240	1376
55°	1079	1249	1429
60°	1017	1268	1498
65°	960	1293	1601
70°	821	1348	1714
75°	687	1404	1781
80°	563	1356	1486
85°	488	1007	1093



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.1	3.1
10°-20°	131.8	8.9
20°-30°	199.7	13.5
30°-40°	241.1	16.3
40°-50°	253.4	17.2
50°-60°	238.4	16.2
60°-70°	198.8	13.5
70°-80°	131.7	8.9
80°-90°	35.1	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°	377.5	25.6
0°-40°	618.7	41.9
0°-60°	1110.4	75.2
0°-90°	1476.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1476.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	482	483	486	486	485	46
15°	463	465	467	469	470	130
25°	426	428	433	438	440	196
35°	372	376	386	394	398	233
45°	307	312	327	344	352	237
55°	230	240	266	293	304	206
65°	151	164	203	236	251	147
75°	66	92	135	163	171	72
85°	16	24	33	35	35	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	486.0	486.0	486.0	486.0	486.0
2.5°	484.2	485.1	487.0	487.0	486.0
5°	482.3	483.2	486.0	486.0	485.1
7.5°	479.5	480.4	482.3	484.2	483.2
10°	475.8	476.7	478.6	480.4	480.4
12.5°	469.3	470.2	473.9	474.9	474.9
15°	462.8	464.6	467.4	469.3	470.2
17.5°	454.4	456.2	460.0	463.7	463.7
20°	446.0	447.9	452.5	456.2	457.2
22.5°	435.8	438.5	443.2	447.9	449.7
25°	425.5	428.3	433.0	438.5	440.4
27.5°	413.4	416.2	422.7	429.2	430.2
30°	401.3	404.1	412.5	418.1	420.9
32.5°	386.4	390.1	398.5	406.9	409.7
35°	372.4	376.2	385.5	393.9	397.6
37.5°	357.5	361.3	371.5	381.7	386.4
40°	340.8	345.4	357.5	368.7	375.2
42.5°	325.0	329.6	341.7	356.6	363.1
45°	307.3	311.9	326.8	343.6	352.0
47.5°	288.6	294.2	311.9	332.4	340.8
50°	270.0	276.5	296.1	319.4	328.7
52.5°	250.5	258.8	281.2	306.3	317.5
55°	230.0	240.2	266.3	293.3	304.5
57.5°	210.4	219.7	250.5	279.3	291.4
60°	189.0	201.1	235.6	265.4	278.4
62.5°	168.5	181.6	219.7	251.4	265.4
65°	150.8	163.9	203.0	236.5	251.4
67.5°	127.6	145.3	189.0	220.7	235.6
70°	104.3	128.5	171.3	203.9	217.9
72.5°	86.6	109.9	153.6	186.2	199.3
75°	66.1	92.2	135.0	162.9	171.3
77.5°	49.3	76.3	115.5	129.4	130.4
80°	36.3	58.7	87.5	92.2	95.9
82.5°	25.1	41.0	56.8	62.4	64.2
85°	15.8	24.2	32.6	35.4	35.4
87.5°	8.4	9.3	11.2	11.2	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)