

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: P312448

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-HRP-CA125-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: P312448  
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-L83050-HRP-CA125-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 4500K 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**

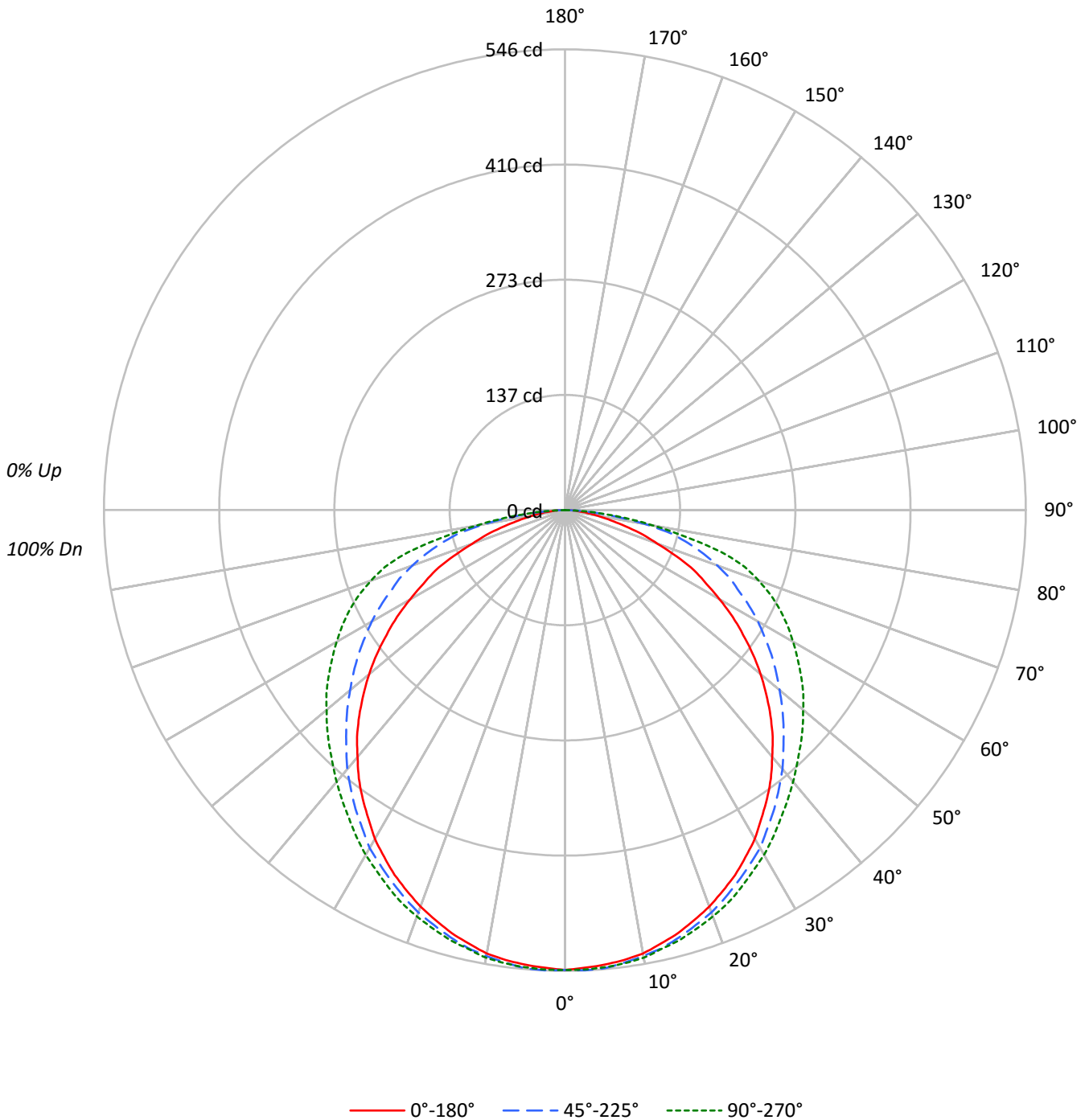
Lumens per Lamp: N/A  
Luminaire Lumens: 1655.0 lumens  
Efficiency: N/A  
Efficacy: 94.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	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	100	100	100	100		
	1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82	82	82	82	82	82		
	2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68	68	68	68	68	68		
	3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56	56	56	56	56	56		
	4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48	48	48	48	48	48		
	5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41	41	41	41	41	41		
	6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36	36	36	36	36	36		
	7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31	31	31	31	31	31		
	8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28	28	28	28	28	28		
	9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25	25	25	25	25	25		
	10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23	23	23	23	23	23		

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

	0°	45°	90°
0°	1467	1467	1467
5°	1461	1472	1469
10°	1458	1466	1472
15°	1446	1460	1469
20°	1432	1453	1468
25°	1417	1442	1466
30°	1398	1437	1466
35°	1372	1420	1464
40°	1342	1408	1478
45°	1311	1394	1502
50°	1268	1390	1543
55°	1210	1401	1602
60°	1140	1421	1680
65°	1077	1449	1795
70°	920	1511	1922
75°	770	1574	1997
80°	631	1520	1666
85°	546	1127	1226



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.7	3.1
10°-20°	147.7	8.9
20°-30°	223.9	13.5
30°-40°	270.4	16.3
40°-50°	284.1	17.2
50°-60°	267.3	16.2
60°-70°	222.9	13.5
70°-80°	147.7	8.9
80°-90°	39.3	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°	423.3	25.6
0°-40°	693.7	41.9
0°-60°	1245.1	75.2
0°-90°	1655.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1655.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	545	545	545	545	545	
5°	541	542	545	545	544	51
15°	519	521	524	526	527	146
25°	477	480	486	492	494	220
35°	418	422	432	442	446	261
45°	344	350	366	385	395	265
55°	258	269	299	329	341	231
65°	169	184	228	265	282	165
75°	74	103	151	183	192	80
85°	18	27	36	40	40	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	545.0	545.0	545.0	545.0	545.0
2.5°	542.9	543.9	546.0	546.0	545.0
5°	540.8	541.8	545.0	545.0	543.9
7.5°	537.7	538.7	540.8	542.9	541.8
10°	533.5	534.5	536.6	538.7	538.7
12.5°	526.2	527.2	531.4	532.4	532.4
15°	518.9	521.0	524.1	526.2	527.2
17.5°	509.5	511.6	515.7	519.9	519.9
20°	500.1	502.2	507.4	511.6	512.6
22.5°	488.6	491.7	496.9	502.2	504.3
25°	477.1	480.2	485.5	491.7	493.8
27.5°	463.5	466.7	474.0	481.3	482.3
30°	450.0	453.1	462.5	468.8	471.9
32.5°	433.3	437.4	446.8	456.2	459.4
35°	417.6	421.8	432.2	441.6	445.8
37.5°	400.9	405.1	416.6	428.0	433.3
40°	382.1	387.3	400.9	413.4	420.7
42.5°	364.4	369.6	383.2	399.9	407.2
45°	344.5	349.7	366.4	385.2	394.6
47.5°	323.6	329.9	349.7	372.7	382.1
50°	302.8	310.1	332.0	358.1	368.5
52.5°	280.8	290.2	315.3	343.5	356.0
55°	257.9	269.4	298.6	328.9	341.4
57.5°	235.9	246.4	280.8	313.2	326.8
60°	211.9	225.5	264.1	297.5	312.2
62.5°	189.0	203.6	246.4	281.9	297.5
65°	169.1	183.7	227.6	265.2	281.9
67.5°	143.0	162.9	211.9	247.4	264.1
70°	116.9	144.1	192.1	228.6	244.3
72.5°	97.1	123.2	172.3	208.8	223.4
75°	74.1	103.4	151.4	182.7	192.1
77.5°	55.3	85.6	129.5	145.1	146.2
80°	40.7	65.8	98.1	103.4	107.5
82.5°	28.2	45.9	63.7	69.9	72.0
85°	17.7	27.1	36.5	39.7	39.7
87.5°	9.4	10.4	12.5	12.5	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)