

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: P313678

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-RDP-CP125-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: P313678  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-55HE-UNV-L83050-RDP-CP125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET  
Light Source: (336) 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: 3534.0 lumens  
Efficiency: N/A  
Efficacy: 78.2 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

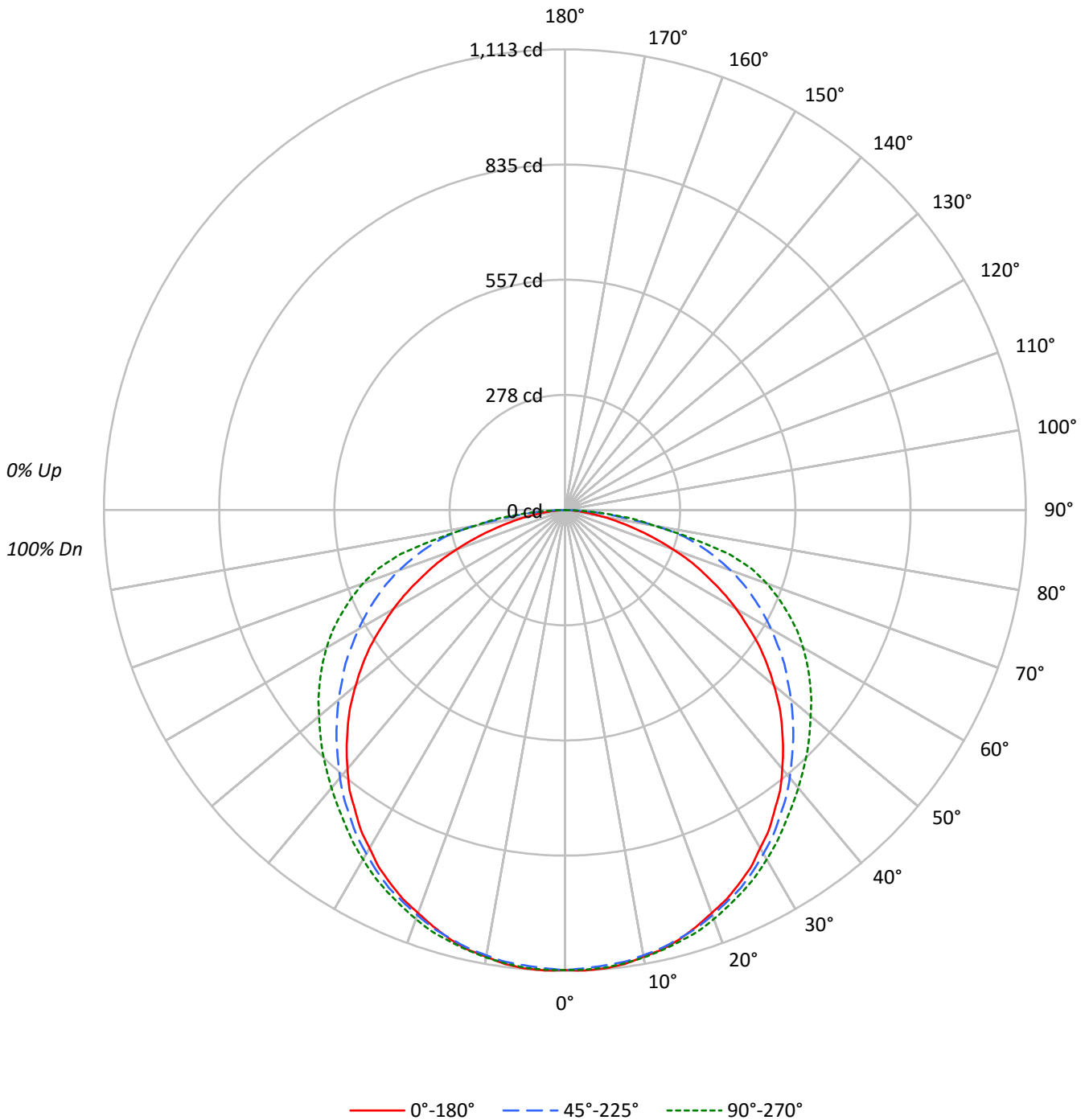
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	1495	1495	1495
5°	1501	1491	1499
10°	1497	1492	1499
15°	1494	1492	1502
20°	1483	1491	1506
25°	1478	1494	1509
30°	1465	1490	1514
35°	1451	1486	1520
40°	1435	1484	1539
45°	1411	1484	1574
50°	1380	1493	1622
55°	1345	1517	1694
60°	1288	1547	1788
65°	1205	1602	1897
70°	1096	1676	2041
75°	930	1768	2132
80°	734	1779	1725
85°	542	1352	1516



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.4	3.0
10°-20°	303.4	8.6
20°-30°	464.0	13.1
30°-40°	567.2	16.0
40°-50°	604.5	17.1
50°-60°	578.0	16.4
60°-70°	489.6	13.9
70°-80°	329.1	9.3
80°-90°	92.8	2.6
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°	872.8	24.7
0°-40°	1440.0	40.7
0°-60°	2622.5	74.2
0°-90°	3534.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3534.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1111	1111	1111	1111	1111	
5°	1111	1110	1104	1110	1110	106
15°	1073	1073	1071	1080	1078	302
25°	996	999	1006	1015	1017	459
35°	884	890	904	922	926	553
45°	742	754	780	813	827	572
55°	573	594	647	698	722	511
65°	379	417	503	570	596	376
75°	179	244	340	398	410	191
85°	35	72	88	95	98	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1111.3	1111.3	1111.3	1111.3	1111.3
2.5°	1113.1	1113.1	1107.8	1111.3	1111.3
5°	1111.3	1109.6	1104.3	1109.6	1109.6
7.5°	1106.1	1104.3	1100.8	1106.1	1104.3
10°	1095.6	1095.6	1092.1	1097.3	1097.3
12.5°	1086.8	1085.0	1083.3	1090.3	1088.6
15°	1072.8	1072.8	1071.0	1079.8	1078.0
17.5°	1055.2	1057.0	1058.8	1065.8	1067.5
20°	1036.0	1039.5	1041.2	1051.7	1051.7
22.5°	1018.4	1020.2	1023.7	1034.2	1034.2
25°	995.7	999.2	1006.2	1014.9	1016.7
27.5°	972.9	974.6	983.4	995.7	997.4
30°	943.1	948.3	958.8	972.9	974.6
32.5°	916.8	922.0	934.3	948.3	951.8
35°	883.5	890.5	904.5	922.0	925.5
37.5°	853.7	858.9	876.5	895.7	901.0
40°	816.9	827.4	844.9	867.7	876.5
42.5°	780.0	790.6	811.6	841.4	851.9
45°	741.5	753.7	780.0	813.3	827.4
47.5°	702.9	716.9	746.7	785.3	801.1
50°	659.1	676.6	713.4	757.3	774.8
52.5°	617.0	638.1	678.4	727.5	750.2
55°	573.2	594.2	646.8	697.7	722.2
57.5°	524.1	552.2	610.0	667.9	694.2
60°	478.5	504.8	575.0	638.1	664.4
62.5°	429.5	464.5	539.9	606.5	632.8
65°	378.6	417.2	503.1	569.7	596.0
67.5°	333.1	375.1	466.3	532.9	559.2
70°	278.7	331.3	426.0	492.6	518.9
72.5°	227.9	285.7	383.9	448.7	473.3
75°	178.8	243.7	340.1	397.9	410.2
77.5°	133.2	201.6	294.5	319.0	310.3
80°	94.7	161.3	229.6	217.4	222.6
82.5°	61.4	122.7	142.0	161.3	166.5
85°	35.1	71.9	87.6	94.7	98.2
87.5°	15.8	26.3	35.1	35.1	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)