

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: P313573

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-RDP-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: P313573  
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: 24FCZ2-45HE-UNV-L83050-RDP-CA125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC 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: 2913.0 lumens  
Efficiency: N/A  
Efficacy: 82.1 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

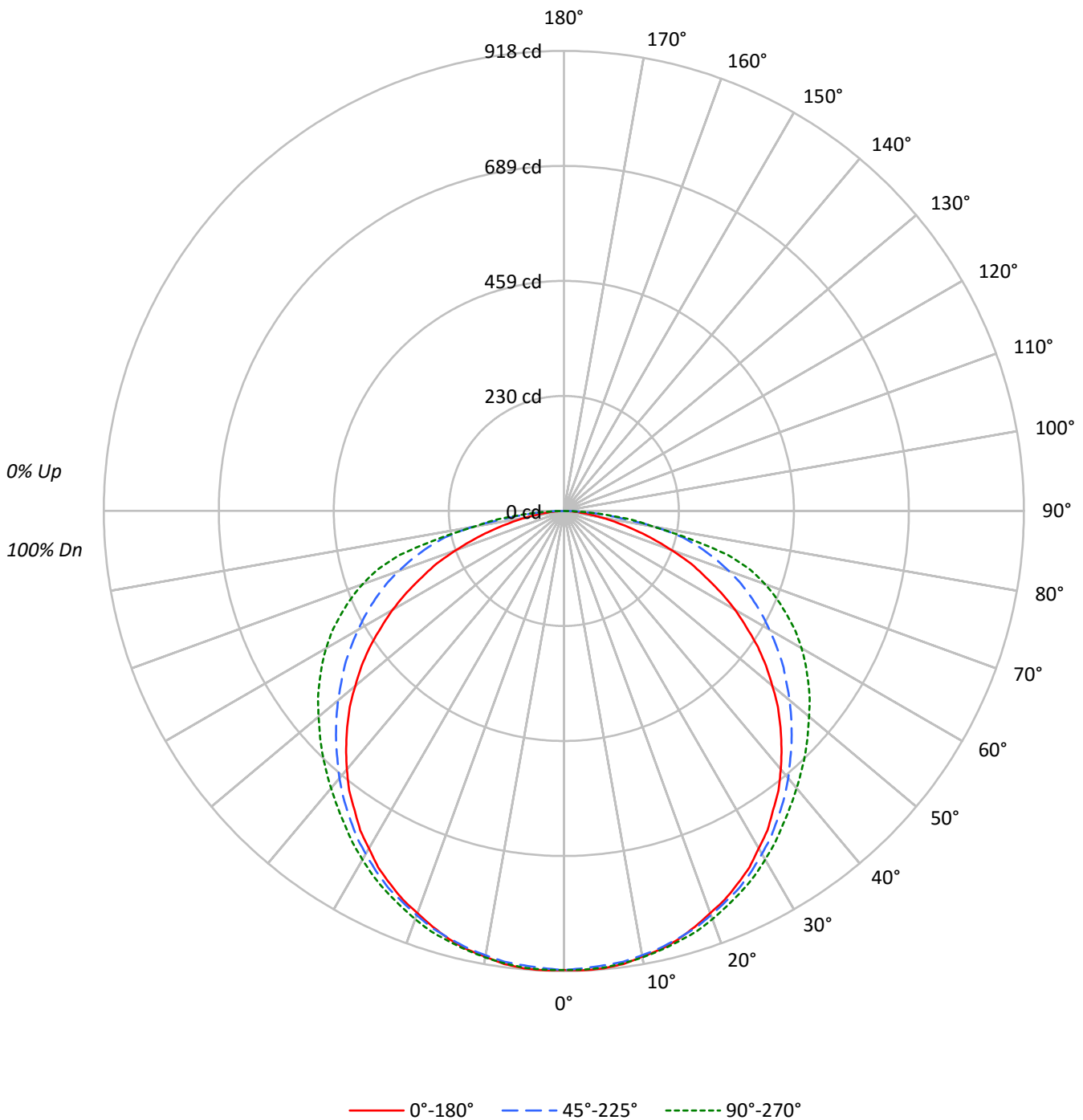
Input Watts (W): 35.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	68	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°	1233	1233	1233
5°	1237	1229	1235
10°	1234	1230	1236
15°	1232	1230	1238
20°	1223	1229	1241
25°	1218	1231	1244
30°	1208	1228	1248
35°	1196	1225	1253
40°	1183	1223	1269
45°	1163	1224	1298
50°	1137	1231	1337
55°	1108	1251	1396
60°	1062	1275	1474
65°	994	1320	1564
70°	904	1381	1683
75°	766	1457	1758
80°	604	1467	1422
85°	446	1115	1249



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.9	3.0
10°-20°	250.1	8.6
20°-30°	382.4	13.1
30°-40°	467.5	16.0
40°-50°	498.3	17.1
50°-60°	476.4	16.4
60°-70°	403.6	13.9
70°-80°	271.2	9.3
80°-90°	76.5	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°	719.4	24.7
0°-40°	1186.9	40.7
0°-60°	2161.6	74.2
0°-90°	2913.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2913.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	916	915	910	915	915	87
15°	884	884	883	890	889	249
25°	821	824	829	837	838	378
35°	728	734	746	760	763	456
45°	611	621	643	670	682	471
55°	472	490	533	575	595	421
65°	312	344	415	470	491	310
75°	147	201	280	328	338	158
85°	29	59	72	78	81	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	916.1	916.1	916.1	916.1	916.1
2.5°	917.5	917.5	913.2	916.1	916.1
5°	916.1	914.6	910.3	914.6	914.6
7.5°	911.7	910.3	907.4	911.7	910.3
10°	903.1	903.1	900.2	904.5	904.5
12.5°	895.8	894.4	892.9	898.7	897.3
15°	884.3	884.3	882.8	890.0	888.6
17.5°	869.8	871.3	872.7	878.5	879.9
20°	853.9	856.8	858.3	866.9	866.9
22.5°	839.5	840.9	843.8	852.5	852.5
25°	820.7	823.6	829.4	836.6	838.0
27.5°	801.9	803.4	810.6	820.7	822.1
30°	777.3	781.7	790.4	801.9	803.4
32.5°	755.7	760.0	770.1	781.7	784.6
35°	728.2	734.0	745.6	760.0	762.9
37.5°	703.7	708.0	722.4	738.3	742.7
40°	673.3	682.0	696.4	715.2	722.4
42.5°	643.0	651.6	669.0	693.5	702.2
45°	611.2	621.3	643.0	670.4	682.0
47.5°	579.4	591.0	615.5	647.3	660.3
50°	543.3	557.7	588.1	624.2	638.6
52.5°	508.6	525.9	559.2	599.6	618.4
55°	472.5	489.8	533.2	575.1	595.3
57.5°	432.0	455.1	502.8	550.5	572.2
60°	394.5	416.1	473.9	525.9	547.6
62.5°	354.0	382.9	445.0	499.9	521.6
65°	312.1	343.9	414.7	469.6	491.3
67.5°	274.5	309.2	384.3	439.2	460.9
70°	229.7	273.1	351.1	406.0	427.7
72.5°	187.8	235.5	316.4	369.9	390.1
75°	147.4	200.8	280.3	328.0	338.1
77.5°	109.8	166.2	242.7	263.0	255.7
80°	78.0	132.9	189.3	179.2	183.5
82.5°	50.6	101.1	117.0	132.9	137.3
85°	28.9	59.2	72.2	78.0	80.9
87.5°	13.0	21.7	28.9	28.9	27.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)