

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: P313571

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-RDP-CA125-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: P313571  
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-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET  
Light Source: (336) 3500K 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**

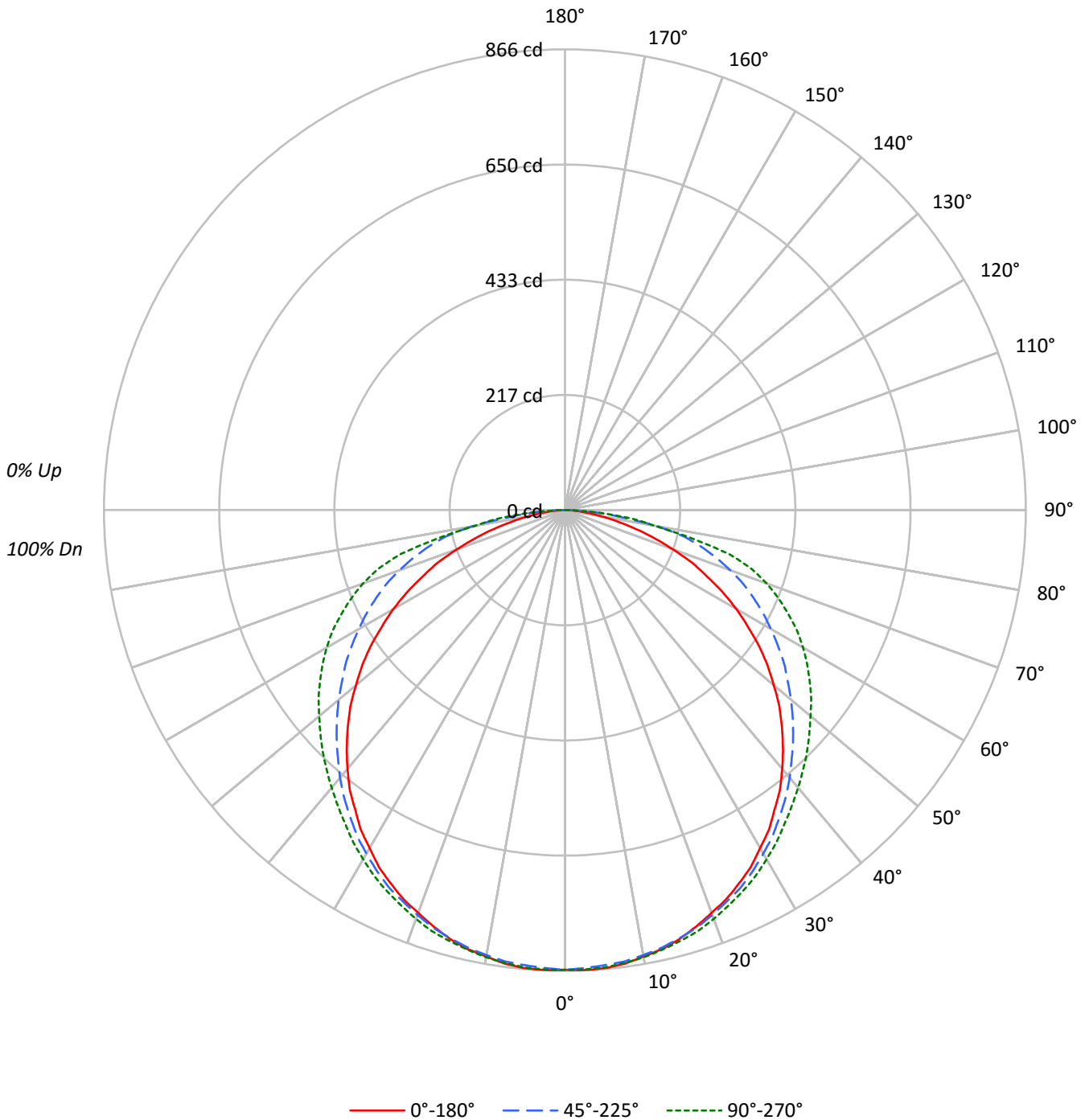
Lumens per Lamp: N/A  
Luminaire Lumens: 2748.0 lumens  
Efficiency: N/A  
Efficacy: 81.3 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1163	1163	1163
5°	1167	1160	1165
10°	1164	1160	1166
15°	1162	1160	1168
20°	1153	1159	1171
25°	1149	1162	1174
30°	1139	1158	1178
35°	1128	1155	1182
40°	1116	1154	1197
45°	1097	1154	1224
50°	1073	1161	1261
55°	1046	1180	1317
60°	1001	1203	1390
65°	937	1245	1475
70°	852	1303	1587
75°	723	1375	1658
80°	570	1384	1341
85°	421	1053	1178



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.0	3.0
10°-20°	235.9	8.6
20°-30°	360.8	13.1
30°-40°	441.0	16.0
40°-50°	470.1	17.1
50°-60°	449.4	16.4
60°-70°	380.7	13.9
70°-80°	255.9	9.3
80°-90°	72.2	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°	678.7	24.7
0°-40°	1119.7	40.7
0°-60°	2039.2	74.2
0°-90°	2748.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2748.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	864	864	864	864	864	
5°	864	863	859	863	863	82
15°	834	834	833	840	838	235
25°	774	777	782	789	791	357
35°	687	692	703	717	720	430
45°	577	586	607	632	643	445
55°	446	462	503	542	562	397
65°	294	324	391	443	463	292
75°	139	190	264	309	319	149
85°	27	56	68	74	76	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	864.2	864.2	864.2	864.2	864.2
2.5°	865.5	865.5	861.4	864.2	864.2
5°	864.2	862.8	858.7	862.8	862.8
7.5°	860.1	858.7	856.0	860.1	858.7
10°	851.9	851.9	849.2	853.3	853.3
12.5°	845.1	843.7	842.4	847.8	846.4
15°	834.2	834.2	832.8	839.6	838.3
17.5°	820.6	821.9	823.3	828.7	830.1
20°	805.6	808.3	809.6	817.8	817.8
22.5°	791.9	793.3	796.0	804.2	804.2
25°	774.2	776.9	782.4	789.2	790.6
27.5°	756.5	757.9	764.7	774.2	775.6
30°	733.3	737.4	745.6	756.5	757.9
32.5°	712.9	717.0	726.5	737.4	740.1
35°	687.0	692.4	703.3	717.0	719.7
37.5°	663.8	667.9	681.5	696.5	700.6
40°	635.2	643.4	657.0	674.7	681.5
42.5°	606.6	614.7	631.1	654.3	662.4
45°	576.6	586.1	606.6	632.5	643.4
47.5°	546.6	557.5	580.7	610.6	622.9
50°	512.5	526.1	554.8	588.8	602.5
52.5°	479.8	496.1	527.5	565.7	583.4
55°	445.7	462.1	503.0	542.5	561.6
57.5°	407.5	429.4	474.3	519.3	539.8
60°	372.1	392.6	447.1	496.1	516.6
62.5°	333.9	361.2	419.8	471.6	492.1
65°	294.4	324.4	391.2	443.0	463.4
67.5°	259.0	291.7	362.6	414.4	434.8
70°	216.7	257.6	331.2	383.0	403.5
72.5°	177.2	222.2	298.5	348.9	368.0
75°	139.0	189.5	264.4	309.4	319.0
77.5°	103.6	156.7	229.0	248.1	241.3
80°	73.6	125.4	178.6	169.0	173.1
82.5°	47.7	95.4	110.4	125.4	129.5
85°	27.3	55.9	68.2	73.6	76.3
87.5°	12.3	20.4	27.3	27.3	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)