

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: P313576

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-RDP-CP125-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: P313576  
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-CP125-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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**

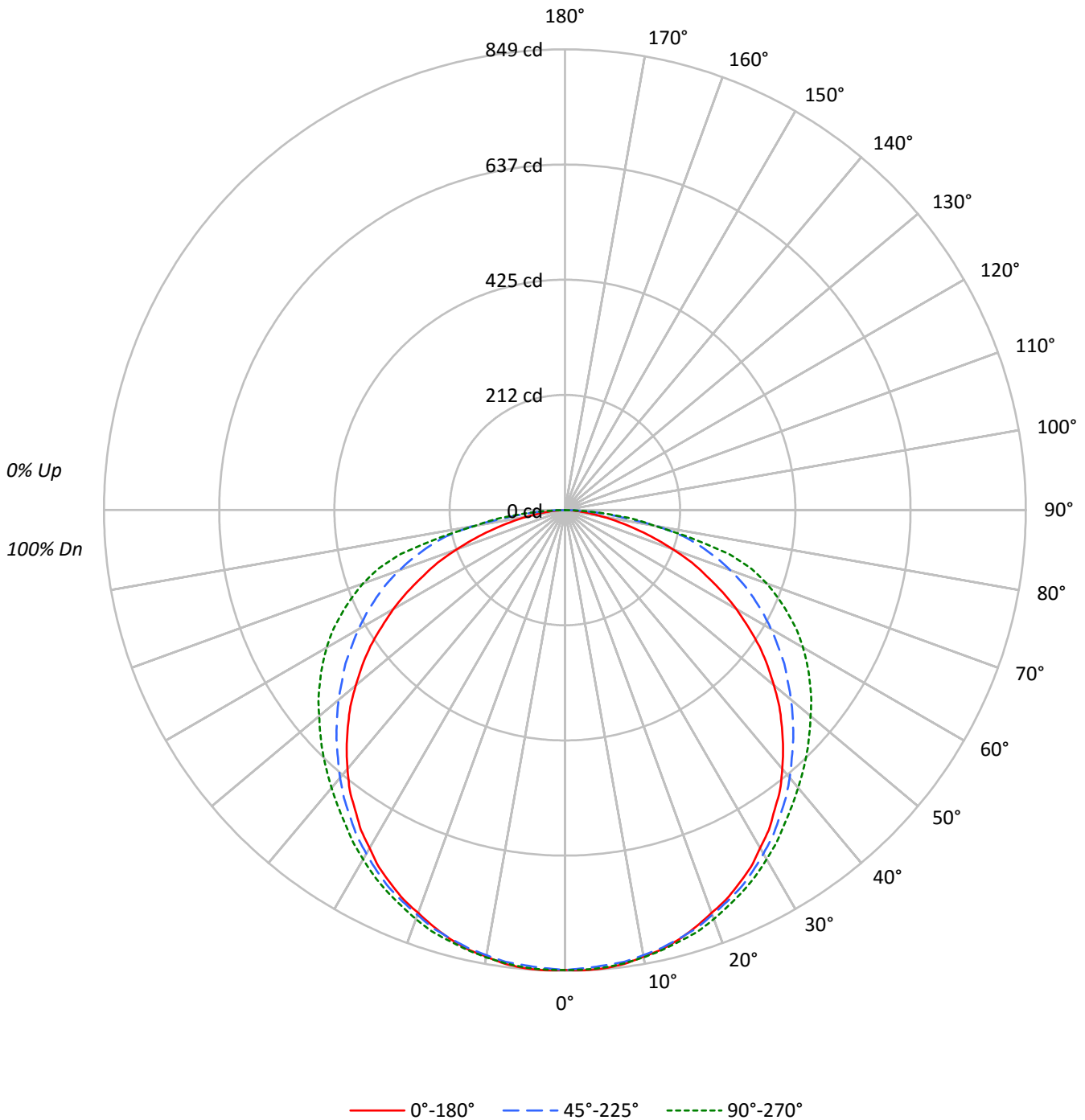
Lumens per Lamp: N/A  
Luminaire Lumens: 2695.0 lumens  
Efficiency: N/A  
Efficacy: 79.7 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1140	1140	1140
5°	1145	1137	1143
10°	1141	1138	1143
15°	1140	1138	1145
20°	1131	1137	1148
25°	1127	1139	1151
30°	1117	1136	1155
35°	1107	1133	1159
40°	1094	1132	1174
45°	1076	1132	1200
50°	1052	1139	1237
55°	1025	1157	1292
60°	982	1180	1363
65°	919	1221	1447
70°	836	1278	1557
75°	709	1348	1626
80°	559	1357	1316
85°	412	1031	1156



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.4	3.0
10°-20°	231.4	8.6
20°-30°	353.8	13.1
30°-40°	432.5	16.0
40°-50°	461.0	17.1
50°-60°	440.8	16.4
60°-70°	373.4	13.9
70°-80°	250.9	9.3
80°-90°	70.8	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°	665.6	24.7
0°-40°	1098.1	40.7
0°-60°	1999.9	74.2
0°-90°	2695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2695.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	848	848	848	848	848	
5°	848	846	842	846	846	81
15°	818	818	817	823	822	231
25°	759	762	767	774	775	350
35°	674	679	690	703	706	422
45°	565	575	595	620	631	436
55°	437	453	493	532	551	389
65°	289	318	384	434	454	287
75°	136	186	259	303	313	146
85°	27	55	67	72	75	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	847.5	847.5	847.5	847.5	847.5
2.5°	848.8	848.8	844.8	847.5	847.5
5°	847.5	846.2	842.2	846.2	846.2
7.5°	843.5	842.2	839.5	843.5	842.2
10°	835.5	835.5	832.8	836.8	836.8
12.5°	828.8	827.4	826.1	831.5	830.1
15°	818.1	818.1	816.8	823.4	822.1
17.5°	804.7	806.1	807.4	812.7	814.1
20°	790.0	792.7	794.0	802.1	802.1
22.5°	776.7	778.0	780.7	788.7	788.7
25°	759.3	761.9	767.3	774.0	775.3
27.5°	741.9	743.2	749.9	759.3	760.6
30°	719.2	723.2	731.2	741.9	743.2
32.5°	699.1	703.1	712.5	723.2	725.9
35°	673.7	679.1	689.8	703.1	705.8
37.5°	651.0	655.0	668.4	683.1	687.1
40°	622.9	630.9	644.3	661.7	668.4
42.5°	594.9	602.9	618.9	641.6	649.7
45°	565.4	574.8	594.9	620.3	630.9
47.5°	536.0	546.7	569.5	598.9	610.9
50°	502.6	516.0	544.1	577.5	590.8
52.5°	470.5	486.6	517.3	554.8	572.1
55°	437.1	453.2	493.3	532.0	550.7
57.5°	399.7	421.1	465.2	509.3	529.4
60°	364.9	385.0	438.5	486.6	506.6
62.5°	327.5	354.2	411.7	462.5	482.6
65°	288.7	318.1	383.6	434.4	454.5
67.5°	254.0	286.1	355.6	406.4	426.4
70°	212.5	252.6	324.8	375.6	395.7
72.5°	173.8	217.9	292.7	342.2	360.9
75°	136.3	185.8	259.3	303.4	312.8
77.5°	101.6	153.7	224.6	243.3	236.6
80°	72.2	123.0	175.1	165.8	169.8
82.5°	46.8	93.6	108.3	123.0	127.0
85°	26.7	54.8	66.8	72.2	74.9
87.5°	12.0	20.1	26.7	26.7	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)