

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: P313098

Luminaire Tested: **24FCZ2-35HE-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: P313098  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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**

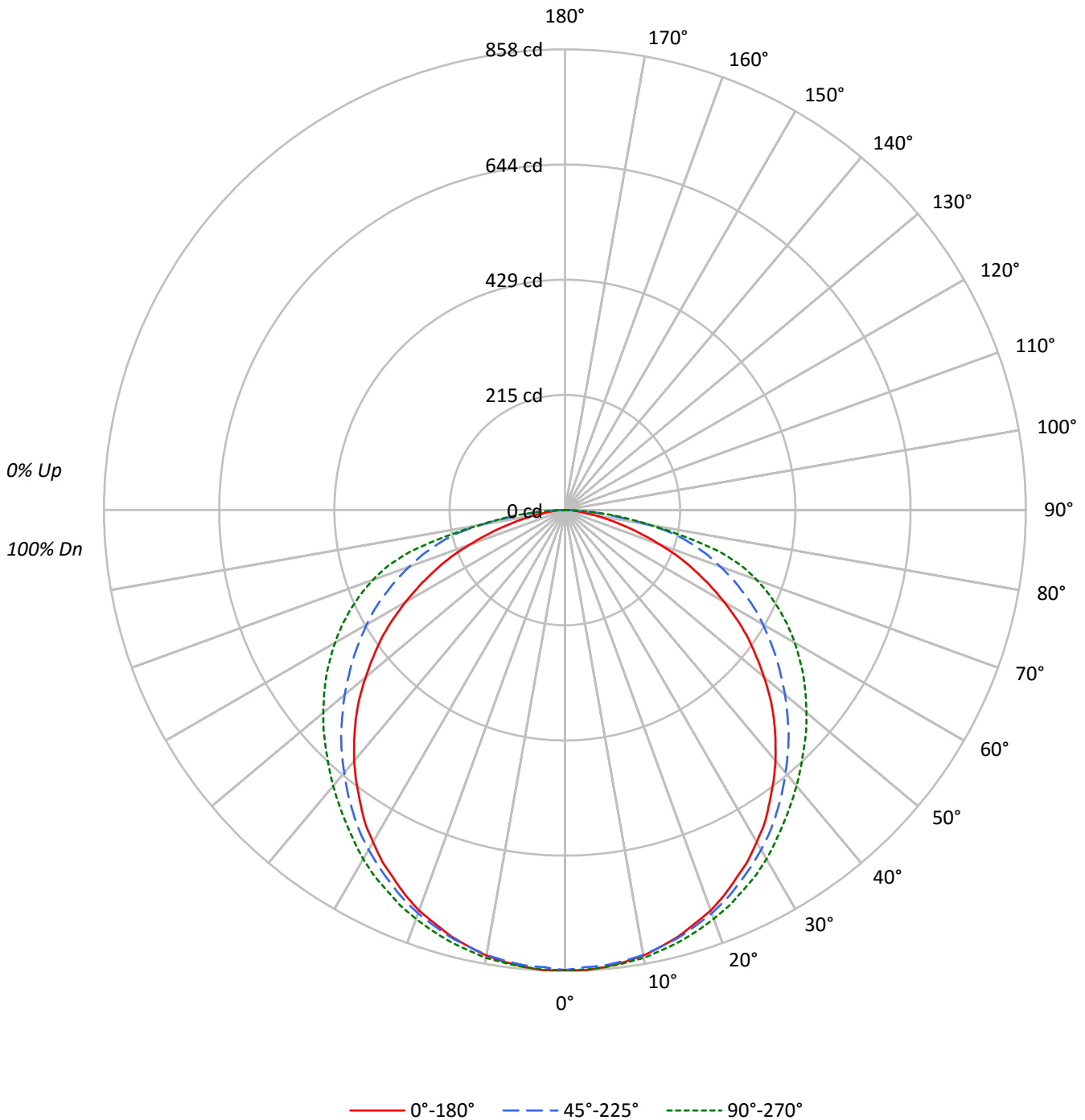
Lumens per Lamp: N/A  
Luminaire Lumens: 2640.0 lumens  
Efficiency: N/A  
Efficacy: 96.7 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 27.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

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

	0°	45°	90°
0°	1153	1153	1153
5°	1154	1149	1154
10°	1151	1149	1157
15°	1144	1147	1158
20°	1136	1144	1160
25°	1122	1139	1162
30°	1109	1135	1166
35°	1091	1129	1167
40°	1072	1122	1178
45°	1047	1121	1197
50°	1013	1120	1229
55°	977	1128	1273
60°	922	1145	1329
65°	852	1172	1404
70°	744	1213	1496
75°	603	1276	1546
80°	446	1251	1251
85°	341	922	1041



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.1	3.1
10°-20°	233.0	8.8
20°-30°	354.7	13.4
30°-40°	430.7	16.3
40°-50°	455.1	17.2
50°-60°	429.4	16.3
60°-70°	357.0	13.5
70°-80°	234.9	8.9
80°-90°	64.0	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°	668.9	25.3
0°-40°	1099.6	41.7
0°-60°	1984.1	75.2
0°-90°	2640.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2640.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	857	857	857	857	857	
5°	854	854	851	854	854	81
15°	821	822	823	831	831	232
25°	756	760	767	780	782	349
35°	664	672	688	705	711	416
45°	550	562	589	618	629	424
55°	417	434	481	526	543	371
65°	268	298	368	422	441	264
75°	116	169	245	291	297	125
85°	22	49	60	66	67	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	856.6	856.6	856.6	856.6	856.6
2.5°	857.7	856.6	852.1	856.6	856.6
5°	854.3	854.3	851.0	854.3	854.3
7.5°	848.8	848.8	846.6	851.0	851.0
10°	842.2	842.2	841.1	846.6	846.6
12.5°	832.2	833.3	832.2	838.9	838.9
15°	821.2	822.3	823.4	831.1	831.1
17.5°	806.8	809.0	811.2	820.1	821.2
20°	793.6	794.7	799.1	809.0	810.1
22.5°	775.9	779.2	784.7	794.7	798.0
25°	756.0	760.4	767.0	780.3	782.5
27.5°	737.2	740.5	749.3	763.7	768.1
30°	714.0	719.5	730.6	744.9	750.4
32.5°	691.9	697.4	710.7	726.1	730.6
35°	664.2	672.0	687.5	705.1	710.7
37.5°	637.7	645.5	664.2	684.1	690.8
40°	610.1	618.9	638.8	662.0	670.9
42.5°	580.2	592.4	614.5	639.9	649.9
45°	550.4	561.5	589.1	617.8	628.9
47.5°	518.4	531.6	561.5	595.7	609.0
50°	484.1	500.7	534.9	572.5	586.9
52.5°	449.8	468.6	507.3	549.3	564.8
55°	416.7	434.4	480.8	526.1	542.7
57.5°	380.2	402.3	453.1	501.8	518.4
60°	342.6	366.9	425.5	476.4	494.0
62.5°	305.0	332.7	399.0	449.8	468.6
65°	267.5	298.4	368.0	422.2	441.0
67.5°	231.0	265.3	339.3	393.5	412.2
70°	189.0	232.1	308.4	361.4	380.2
72.5°	150.3	200.0	278.5	328.3	344.8
75°	116.0	169.1	245.4	290.7	297.3
77.5°	85.1	138.2	211.1	226.6	227.7
80°	57.5	110.5	161.4	159.2	161.4
82.5°	37.6	82.9	101.7	113.8	114.9
85°	22.1	48.6	59.7	66.3	67.4
87.5°	11.1	16.6	21.0	22.1	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)