

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: P309281

Luminaire Tested: **24FCZ2-35-UNV-L82765-HRP-CA08-W2A-U-5500K**

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: P309281  
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: 24FCZ2-35-UNV-L82765-HRP-CA08-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 5500K 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**

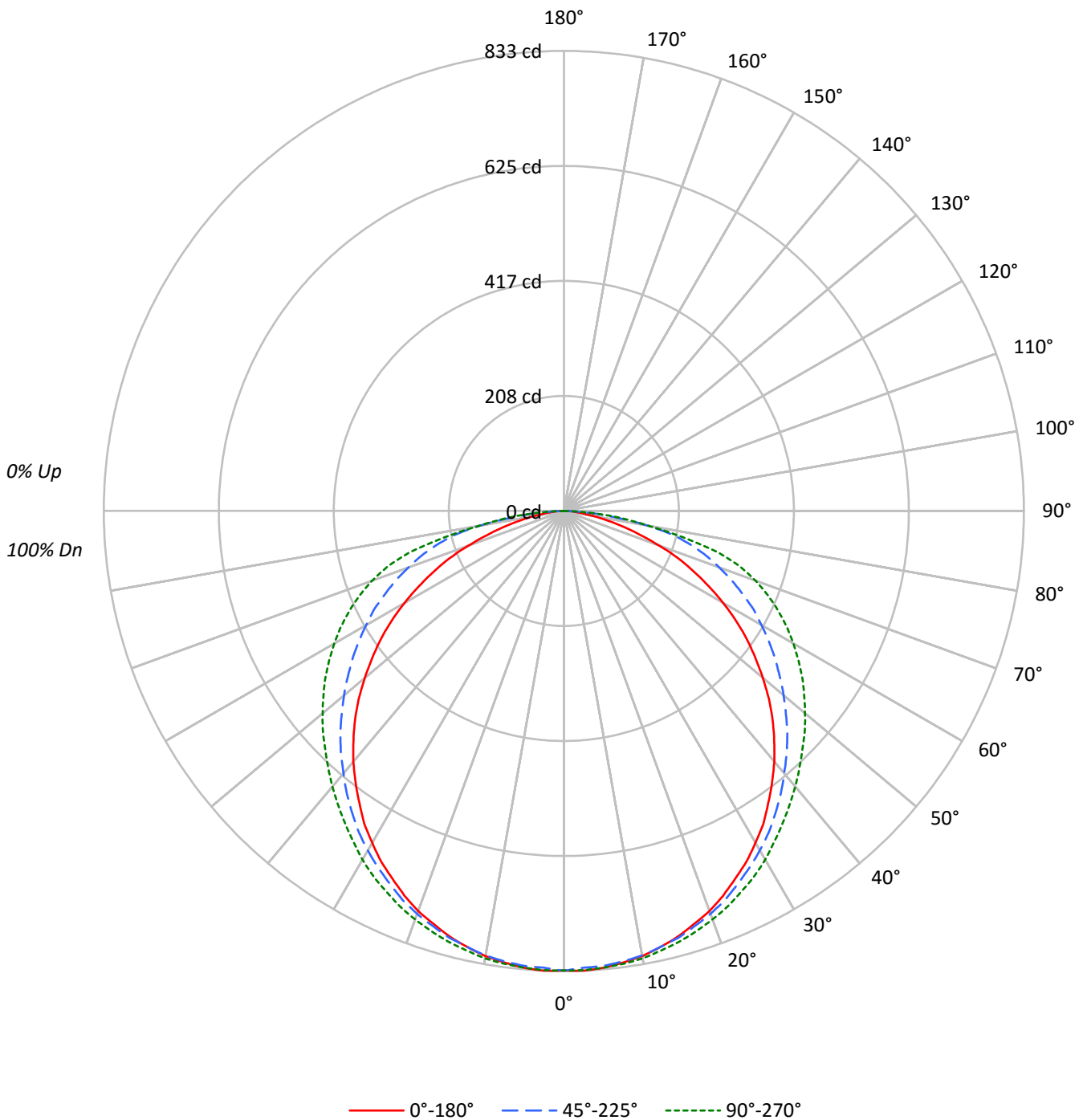
Lumens per Lamp: N/A  
Luminaire Lumens: 2565.0 lumens  
Efficiency: N/A  
Efficacy: 89.1 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	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°	1120	1120	1120
5°	1121	1117	1121
10°	1118	1116	1124
15°	1111	1114	1125
20°	1104	1112	1127
25°	1090	1106	1129
30°	1078	1103	1133
35°	1060	1097	1134
40°	1041	1090	1145
45°	1018	1089	1163
50°	984	1088	1194
55°	950	1096	1237
60°	896	1112	1292
65°	827	1138	1364
70°	722	1179	1453
75°	586	1239	1502
80°	432	1215	1215
85°	332	895	1011



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.8	3.1
10°-20°	226.4	8.8
20°-30°	344.7	13.4
30°-40°	418.5	16.3
40°-50°	442.1	17.2
50°-60°	417.2	16.3
60°-70°	346.9	13.5
70°-80°	228.2	8.9
80°-90°	62.2	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°	649.9	25.3
0°-40°	1068.4	41.7
0°-60°	1927.7	75.2
0°-90°	2565.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2565.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	832	832	832	832	832	
5°	830	830	827	830	830	79
15°	798	799	800	808	808	225
25°	734	739	745	758	760	339
35°	645	653	668	685	690	404
45°	535	546	572	600	611	412
55°	405	422	467	511	527	361
65°	260	290	358	410	428	257
75°	113	164	238	282	289	121
85°	22	47	58	64	66	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	832.2	832.2	832.2	832.2	832.2
2.5°	833.3	832.2	827.9	832.2	832.2
5°	830.1	830.1	826.8	830.1	830.1
7.5°	824.7	824.7	822.6	826.8	826.8
10°	818.3	818.3	817.2	822.6	822.6
12.5°	808.6	809.7	808.6	815.0	815.0
15°	797.9	798.9	800.0	807.5	807.5
17.5°	783.9	786.0	788.2	796.8	797.9
20°	771.0	772.1	776.4	786.0	787.1
22.5°	753.8	757.0	762.4	772.1	775.3
25°	734.5	738.8	745.2	758.1	760.3
27.5°	716.2	719.5	728.1	742.0	746.3
30°	693.7	699.1	709.8	723.8	729.1
32.5°	672.2	677.6	690.5	705.5	709.8
35°	645.4	652.9	667.9	685.1	690.5
37.5°	619.6	627.1	645.4	664.7	671.1
40°	592.8	601.3	620.7	643.2	651.8
42.5°	563.8	575.6	597.0	621.7	631.4
45°	534.8	545.5	572.4	600.3	611.0
47.5°	503.6	516.5	545.5	578.8	591.7
50°	470.3	486.4	519.7	556.2	570.2
52.5°	437.0	455.3	492.9	533.7	548.7
55°	404.8	422.0	467.1	511.1	527.2
57.5°	369.4	390.9	440.3	487.5	503.6
60°	332.9	356.5	413.4	462.8	480.0
62.5°	296.4	323.2	387.7	437.0	455.3
65°	259.9	289.9	357.6	410.2	428.5
67.5°	224.4	257.7	329.7	382.3	400.5
70°	183.6	225.5	299.6	351.1	369.4
72.5°	146.0	194.4	270.6	318.9	335.0
75°	112.8	164.3	238.4	282.4	288.9
77.5°	82.7	134.2	205.1	220.1	221.2
80°	55.8	107.4	156.8	154.6	156.8
82.5°	36.5	80.5	98.8	110.6	111.7
85°	21.5	47.2	58.0	64.4	65.5
87.5°	10.7	16.1	20.4	21.5	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)