

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: P313113

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-HRP-CP250-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: P313113  
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-CP250-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"  
POLYCARB 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**

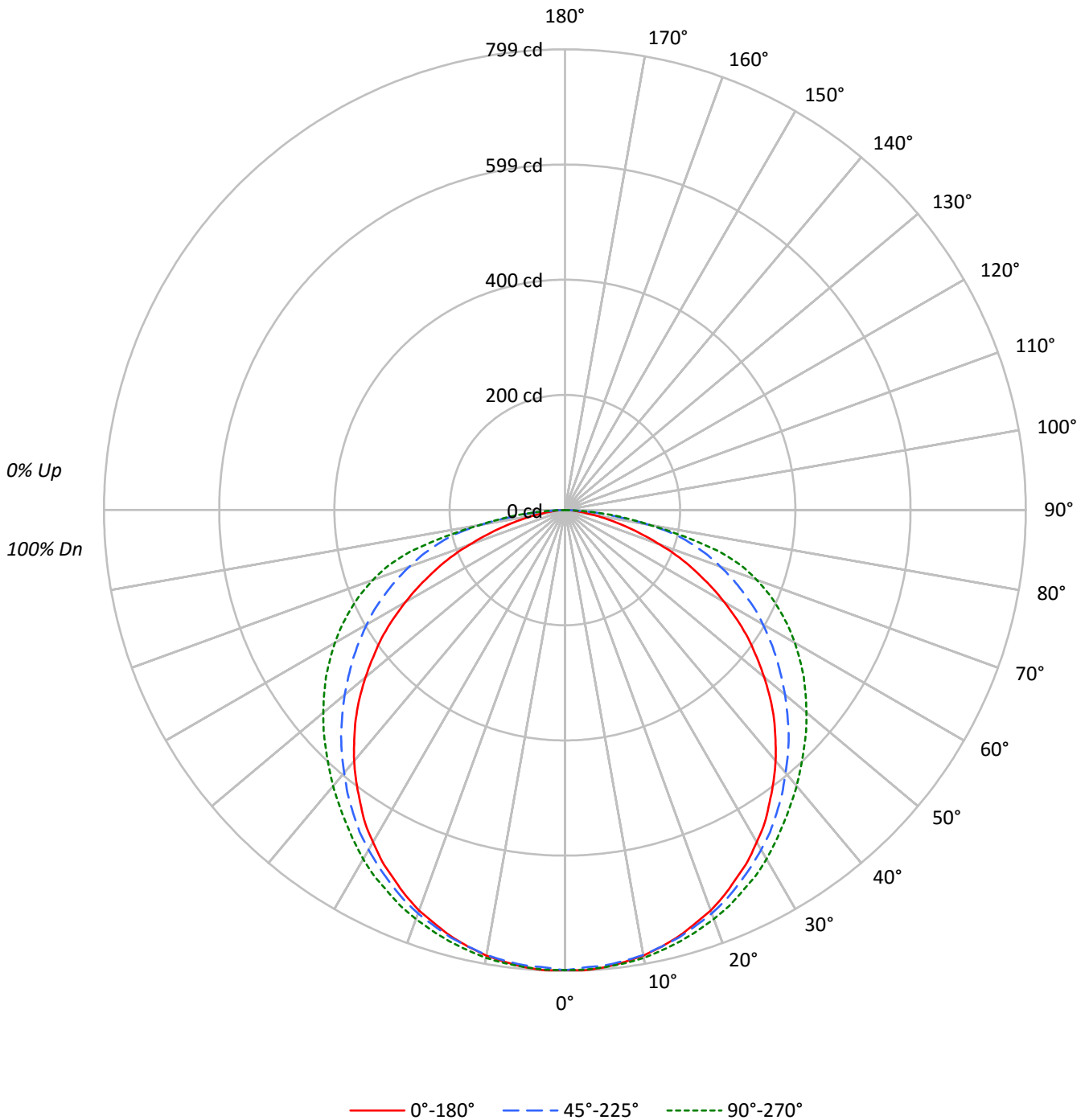
Lumens per Lamp: N/A  
Luminaire Lumens: 2459.0 lumens  
Efficiency: N/A  
Efficacy: 90.1 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 27.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	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°	1073	1073	1073
5°	1075	1071	1075
10°	1072	1070	1077
15°	1065	1068	1078
20°	1058	1066	1080
25°	1045	1061	1082
30°	1033	1057	1086
35°	1016	1052	1087
40°	998	1045	1098
45°	976	1044	1115
50°	944	1043	1144
55°	910	1050	1186
60°	859	1066	1238
65°	793	1091	1308
70°	692	1130	1393
75°	562	1188	1439
80°	415	1165	1165
85°	318	858	969



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.6	3.1
10°-20°	217.0	8.8
20°-30°	330.4	13.4
30°-40°	401.2	16.3
40°-50°	423.9	17.2
50°-60°	400.0	16.3
60°-70°	332.6	13.5
70°-80°	218.8	8.9
80°-90°	59.6	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°	623.0	25.3
0°-40°	1024.2	41.7
0°-60°	1848.0	75.2
0°-90°	2459.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2459.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	798	798	798	798	798	
5°	796	796	793	796	796	76
15°	765	766	767	774	774	216
25°	704	708	714	727	729	325
35°	619	626	640	657	662	387
45°	513	523	549	576	586	395
55°	388	405	448	490	506	346
65°	249	278	343	393	411	246
75°	108	158	228	271	277	116
85°	21	45	56	62	63	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	797.8	797.8	797.8	797.8	797.8
2.5°	798.9	797.8	793.7	797.8	797.8
5°	795.8	795.8	792.7	795.8	795.8
7.5°	790.6	790.6	788.6	792.7	792.7
10°	784.4	784.4	783.4	788.6	788.6
12.5°	775.2	776.2	775.2	781.4	781.4
15°	764.9	765.9	766.9	774.1	774.1
17.5°	751.5	753.6	755.6	763.9	764.9
20°	739.1	740.2	744.3	753.6	754.6
22.5°	722.7	725.8	730.9	740.2	743.3
25°	704.1	708.3	714.4	726.8	728.9
27.5°	686.6	689.7	698.0	711.4	715.5
30°	665.0	670.2	680.5	693.8	699.0
32.5°	644.4	649.6	661.9	676.3	680.5
35°	618.7	625.9	640.3	656.8	661.9
37.5°	594.0	601.2	618.7	637.2	643.4
40°	568.3	576.5	595.0	616.6	624.9
42.5°	540.5	551.8	572.4	596.1	605.3
45°	512.7	523.0	548.7	575.5	585.8
47.5°	482.8	495.2	523.0	554.9	567.2
50°	450.9	466.3	498.3	533.3	546.6
52.5°	419.0	436.5	472.5	511.6	526.0
55°	388.1	404.6	447.8	490.0	505.5
57.5°	354.1	374.7	422.1	467.4	482.8
60°	319.1	341.8	396.3	443.7	460.2
62.5°	284.1	309.9	371.6	419.0	436.5
65°	249.1	278.0	342.8	393.3	410.8
67.5°	215.2	247.1	316.0	366.5	384.0
70°	176.0	216.2	287.2	336.6	354.1
72.5°	140.0	186.3	259.4	305.7	321.2
75°	108.1	157.5	228.5	270.7	276.9
77.5°	79.3	128.7	196.6	211.0	212.1
80°	53.5	102.9	150.3	148.2	150.3
82.5°	35.0	77.2	94.7	106.0	107.1
85°	20.6	45.3	55.6	61.8	62.8
87.5°	10.3	15.4	19.6	20.6	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)