

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: P309945

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-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: P309945  
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: 24FCZ2-35HE-UNV-L82765-RDP-CP250-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 2040.0 lumens  
Efficiency: N/A  
Efficacy: 77.0 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

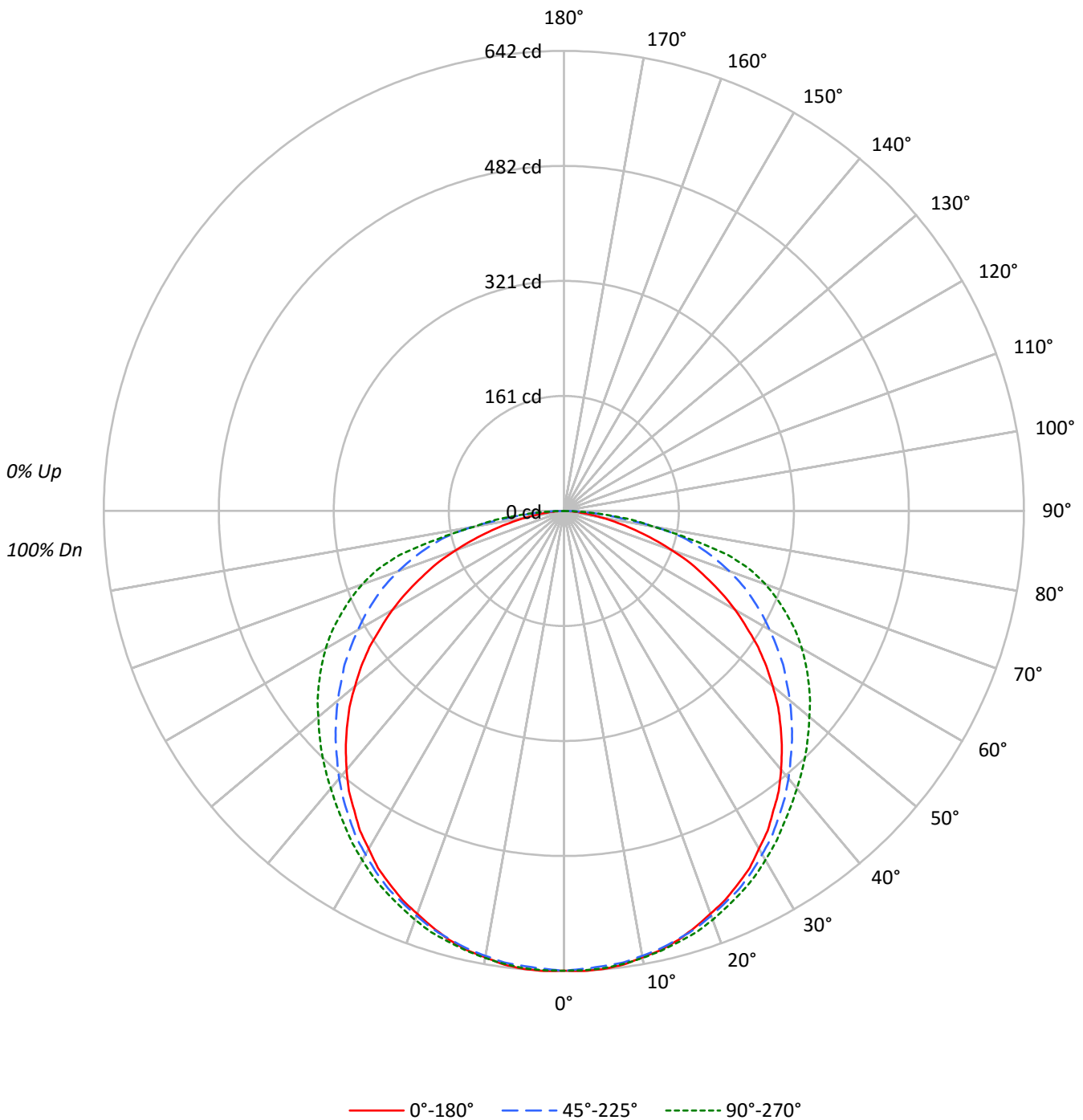
Input Watts (W): 26.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	863	863	863
5°	866	861	865
10°	864	861	865
15°	863	861	867
20°	856	861	869
25°	853	862	871
30°	846	860	874
35°	838	858	878
40°	828	857	889
45°	814	857	909
50°	796	862	936
55°	776	876	978
60°	743	893	1032
65°	696	925	1095
70°	633	967	1178
75°	536	1020	1231
80°	423	1027	996
85°	312	781	875



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.9	3.0
10°-20°	175.1	8.6
20°-30°	267.8	13.1
30°-40°	327.4	16.0
40°-50°	349.0	17.1
50°-60°	333.6	16.4
60°-70°	282.6	13.9
70°-80°	190.0	9.3
80°-90°	53.6	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°	503.8	24.7
0°-40°	831.2	40.7
0°-60°	1513.8	74.2
0°-90°	2040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2040.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	642	642	642	642	642	
5°	642	640	638	640	640	61
15°	619	619	618	623	622	175
25°	575	577	581	586	587	265
35°	510	514	522	532	534	319
45°	428	435	450	470	478	330
55°	331	343	373	403	417	295
65°	219	241	290	329	344	217
75°	103	141	196	230	237	110
85°	20	42	51	55	57	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	641.5	641.5	641.5	641.5	641.5
2.5°	642.5	642.5	639.5	641.5	641.5
5°	641.5	640.5	637.5	640.5	640.5
7.5°	638.5	637.5	635.5	638.5	637.5
10°	632.4	632.4	630.4	633.4	633.4
12.5°	627.4	626.3	625.3	629.4	628.4
15°	619.3	619.3	618.2	623.3	622.3
17.5°	609.1	610.2	611.2	615.2	616.2
20°	598.0	600.0	601.0	607.1	607.1
22.5°	587.9	588.9	590.9	597.0	597.0
25°	574.7	576.8	580.8	585.9	586.9
27.5°	561.6	562.6	567.7	574.7	575.8
30°	544.4	547.4	553.5	561.6	562.6
32.5°	529.2	532.2	539.3	547.4	549.4
35°	510.0	514.0	522.1	532.2	534.3
37.5°	492.8	495.8	505.9	517.1	520.1
40°	471.5	477.6	487.7	500.9	505.9
42.5°	450.3	456.4	468.5	485.7	491.8
45°	428.0	435.1	450.3	469.5	477.6
47.5°	405.8	413.9	431.1	453.3	462.4
50°	380.5	390.6	411.8	437.1	447.2
52.5°	356.2	368.3	391.6	419.9	433.1
55°	330.9	343.0	373.4	402.7	416.9
57.5°	302.5	318.7	352.1	385.5	400.7
60°	276.2	291.4	331.9	368.3	383.5
62.5°	247.9	268.1	311.7	350.1	365.3
65°	218.6	240.8	290.4	328.9	344.0
67.5°	192.3	216.5	269.2	307.6	322.8
70°	160.9	191.2	245.9	284.3	299.5
72.5°	131.5	164.9	221.6	259.0	273.2
75°	103.2	140.6	196.3	229.7	236.8
77.5°	76.9	116.4	170.0	184.2	179.1
80°	54.6	93.1	132.6	125.5	128.5
82.5°	35.4	70.8	82.0	93.1	96.1
85°	20.2	41.5	50.6	54.6	56.7
87.5°	9.1	15.2	20.2	20.2	19.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)