

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: P309943

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CP250-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: P309943
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-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 1961.0 lumens
Efficiency: N/A
Efficacy: 75.1 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

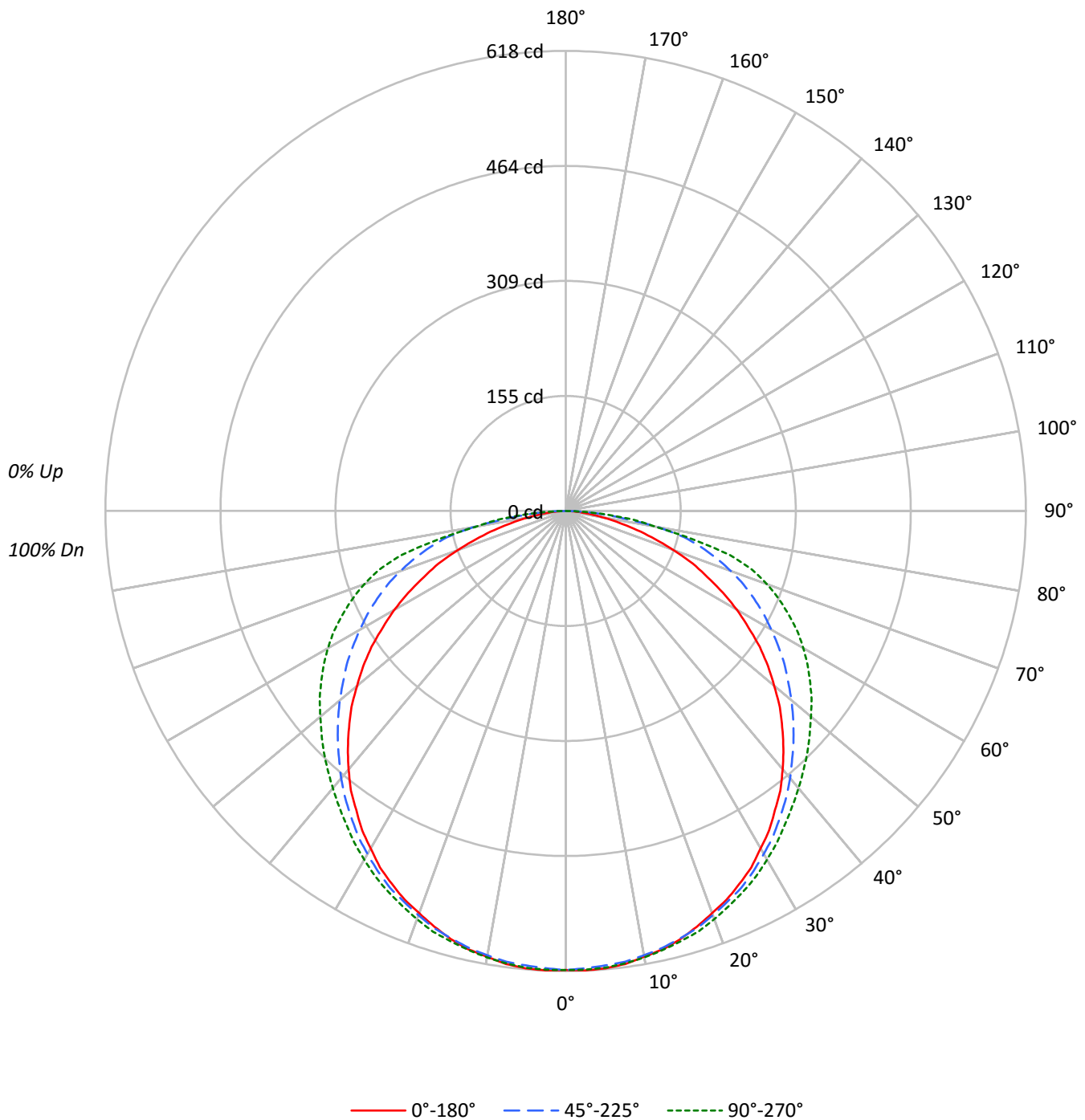
Input Watts (W): 26.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309943

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-RDP-CP250-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P309943

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-RDP-CP250-W2A-U-3500K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	830	830	830
5°	833	828	832
10°	831	828	832
15°	829	828	833
20°	823	827	836
25°	820	829	838
30°	813	827	840
35°	805	824	844
40°	796	823	854
45°	783	824	874
50°	765	829	900
55°	746	842	940
60°	714	858	992
65°	669	889	1053
70°	609	930	1133
75°	516	981	1183
80°	407	987	957
85°	301	750	841



TEST NUMBER: P309943

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-RDP-CP250-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.5	3.0
10°-20°	168.4	8.6
20°-30°	257.5	13.1
30°-40°	314.7	16.0
40°-50°	335.4	17.1
50°-60°	320.7	16.4
60°-70°	271.7	13.9
70°-80°	182.6	9.3
80°-90°	51.5	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°	484.3	24.7
0°-40°	799.0	40.7
0°-60°	1455.2	74.2
0°-90°	1961.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1961.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	617	617	617	617	617	
5°	617	616	613	616	616	59
15°	595	595	594	599	598	168
25°	552	554	558	563	564	255
35°	490	494	502	512	514	307
45°	411	418	433	451	459	317
55°	318	330	359	387	401	283
65°	210	232	279	316	331	209
75°	99	135	189	221	228	106
85°	20	40	49	52	54	24
90°	0	0	0	0	0	



TEST NUMBER: P309943

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-RDP-CP250-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	616.7	616.7	616.7	616.7	616.7
2.5°	617.7	617.7	614.7	616.7	616.7
5°	616.7	615.7	612.8	615.7	615.7
7.5°	613.8	612.8	610.8	613.8	612.8
10°	607.9	607.9	606.0	608.9	608.9
12.5°	603.1	602.1	601.1	605.0	604.0
15°	595.3	595.3	594.3	599.2	598.2
17.5°	585.6	586.5	587.5	591.4	592.4
20°	574.9	576.8	577.8	583.6	583.6
22.5°	565.1	566.1	568.0	573.9	573.9
25°	552.5	554.4	558.3	563.2	564.2
27.5°	539.8	540.8	545.7	552.5	553.5
30°	523.3	526.2	532.1	539.8	540.8
32.5°	508.7	511.6	518.4	526.2	528.2
35°	490.2	494.1	501.9	511.6	513.6
37.5°	473.7	476.6	486.3	497.0	500.0
40°	453.3	459.1	468.8	481.5	486.3
42.5°	432.8	438.7	450.4	466.9	472.7
45°	411.4	418.3	432.8	451.3	459.1
47.5°	390.0	397.8	414.4	435.8	444.5
50°	365.7	375.5	395.9	420.2	429.9
52.5°	342.4	354.1	376.4	403.7	416.3
55°	318.1	329.7	358.9	387.1	400.7
57.5°	290.8	306.4	338.5	370.6	385.2
60°	265.5	280.1	319.0	354.1	368.6
62.5°	238.3	257.8	299.6	336.5	351.1
65°	210.1	231.5	279.2	316.1	330.7
67.5°	184.8	208.2	258.7	295.7	310.3
70°	154.7	183.8	236.4	273.3	287.9
72.5°	126.4	158.5	213.0	249.0	262.6
75°	99.2	135.2	188.7	220.8	227.6
77.5°	73.9	111.9	163.4	177.0	172.2
80°	52.5	89.5	127.4	120.6	123.5
82.5°	34.0	68.1	78.8	89.5	92.4
85°	19.5	39.9	48.6	52.5	54.5
87.5°	8.8	14.6	19.5	19.5	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)