

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: P309313

Luminaire Tested: **24FCZ2-35-UNV-L82765-HRP-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: P309313
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-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 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: 2236.0 lumens
Efficiency: N/A
Efficacy: 79.6 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

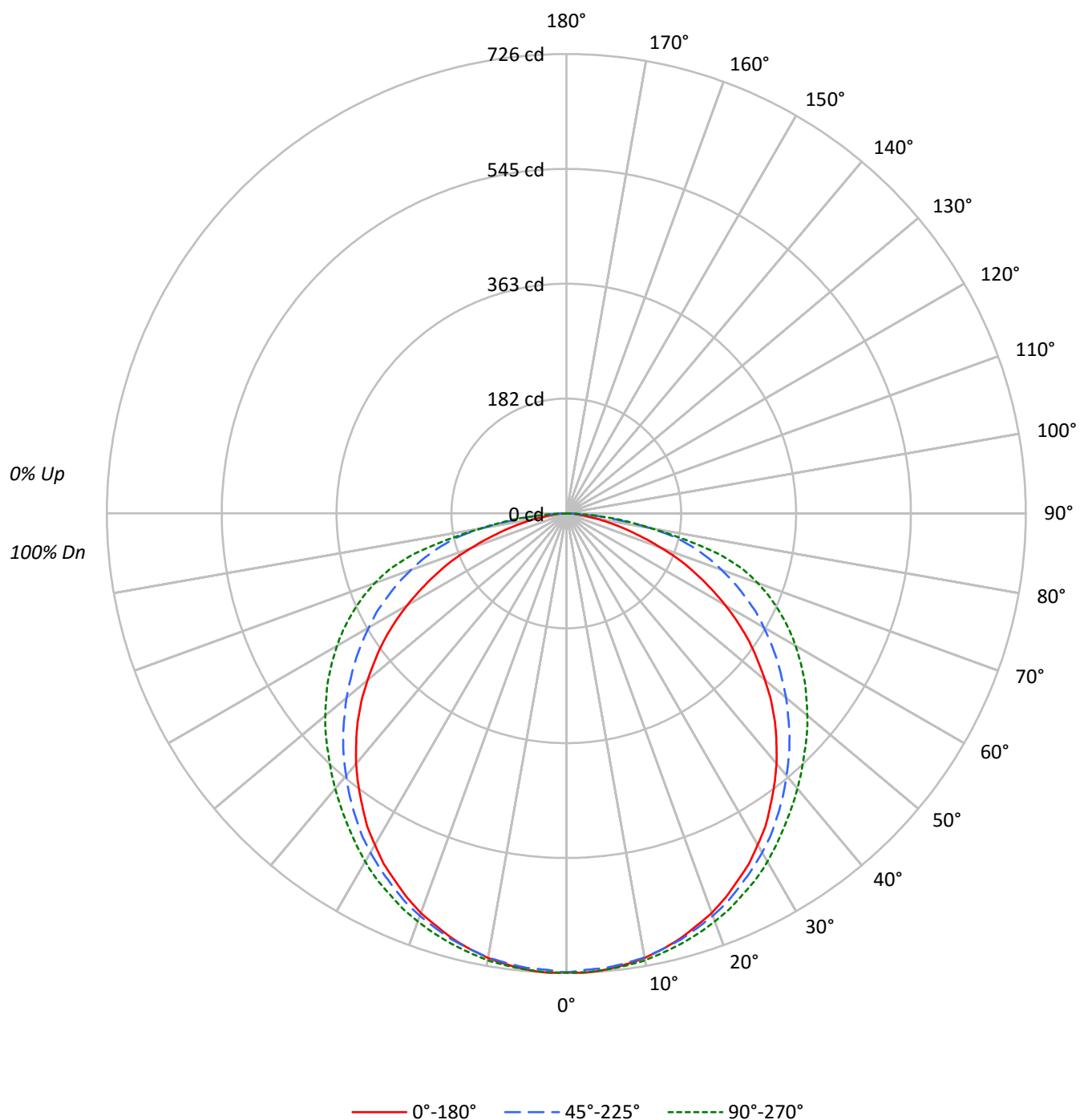
Input Watts (W): 28.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309313

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

Luminous Intensity Polar Plot





TEST NUMBER: P309313

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-HRP-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	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	976	976	976
5°	977	974	977
10°	975	973	980
15°	969	971	980
20°	962	969	983
25°	951	964	984
30°	939	961	987
35°	924	956	989
40°	908	950	998
45°	887	949	1013
50°	858	948	1041
55°	828	955	1078
60°	781	970	1126
65°	721	992	1189
70°	630	1028	1267
75°	511	1080	1309
80°	377	1059	1059
85°	289	780	881



TEST NUMBER: P309313

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.7	3.1
10°-20°	197.4	8.8
20°-30°	300.4	13.4
30°-40°	364.8	16.3
40°-50°	385.4	17.2
50°-60°	363.7	16.3
60°-70°	302.4	13.5
70°-80°	198.9	8.9
80°-90°	54.2	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°	566.5	25.3
0°-40°	931.3	41.7
0°-60°	1680.4	75.2
0°-90°	2236.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2236.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	726	726	726	726	726	
5°	724	724	721	724	724	69
15°	696	696	697	704	704	196
25°	640	644	650	661	663	295
35°	563	569	582	597	602	352
45°	466	476	499	523	533	359
55°	353	368	407	446	460	314
65°	226	253	312	358	374	224
75°	98	143	208	246	252	106
85°	19	41	50	56	57	23
90°	0	0	0	0	0	



TEST NUMBER: P309313

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	725.5	725.5	725.5	725.5	725.5
2.5°	726.4	725.5	721.7	725.5	725.5
5°	723.6	723.6	720.8	723.6	723.6
7.5°	718.9	718.9	717.0	720.8	720.8
10°	713.3	713.3	712.4	717.0	717.0
12.5°	704.9	705.8	704.9	710.5	710.5
15°	695.5	696.5	697.4	703.9	703.9
17.5°	683.3	685.2	687.1	694.6	695.5
20°	672.1	673.1	676.8	685.2	686.2
22.5°	657.1	659.9	664.6	673.1	675.9
25°	640.3	644.0	649.6	660.9	662.8
27.5°	624.4	627.2	634.7	646.8	650.6
30°	604.7	609.4	618.8	630.9	635.6
32.5°	586.0	590.7	601.9	615.0	618.8
35°	562.6	569.1	582.2	597.2	601.9
37.5°	540.1	546.7	562.6	579.4	585.1
40°	516.7	524.2	541.1	560.7	568.2
42.5°	491.4	501.7	520.5	542.0	550.4
45°	466.2	475.5	498.9	523.3	532.6
47.5°	439.0	450.3	475.5	504.6	515.8
50°	410.0	424.1	453.1	484.9	497.1
52.5°	381.0	396.9	429.7	465.2	478.3
55°	352.9	367.9	407.2	445.6	459.6
57.5°	322.0	340.7	383.8	425.0	439.0
60°	290.2	310.8	360.4	403.5	418.4
62.5°	258.4	281.8	337.9	381.0	396.9
65°	226.5	252.7	311.7	357.6	373.5
67.5°	195.6	224.7	287.4	333.2	349.2
70°	160.1	196.6	261.2	306.1	322.0
72.5°	127.3	169.4	235.9	278.0	292.1
75°	98.3	143.2	207.8	246.2	251.8
77.5°	72.1	117.0	178.8	191.9	192.8
80°	48.7	93.6	136.7	134.8	136.7
82.5°	31.8	70.2	86.1	96.4	97.4
85°	18.7	41.2	50.5	56.2	57.1
87.5°	9.4	14.0	17.8	18.7	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)