

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: P310040

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CA08-W2A-U-2700K**

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: P310040
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: 24FCZ2-40-UNV-L82765-RDP-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 2700K 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: 2284.0 lumens
Efficiency: N/A
Efficacy: 69.8 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

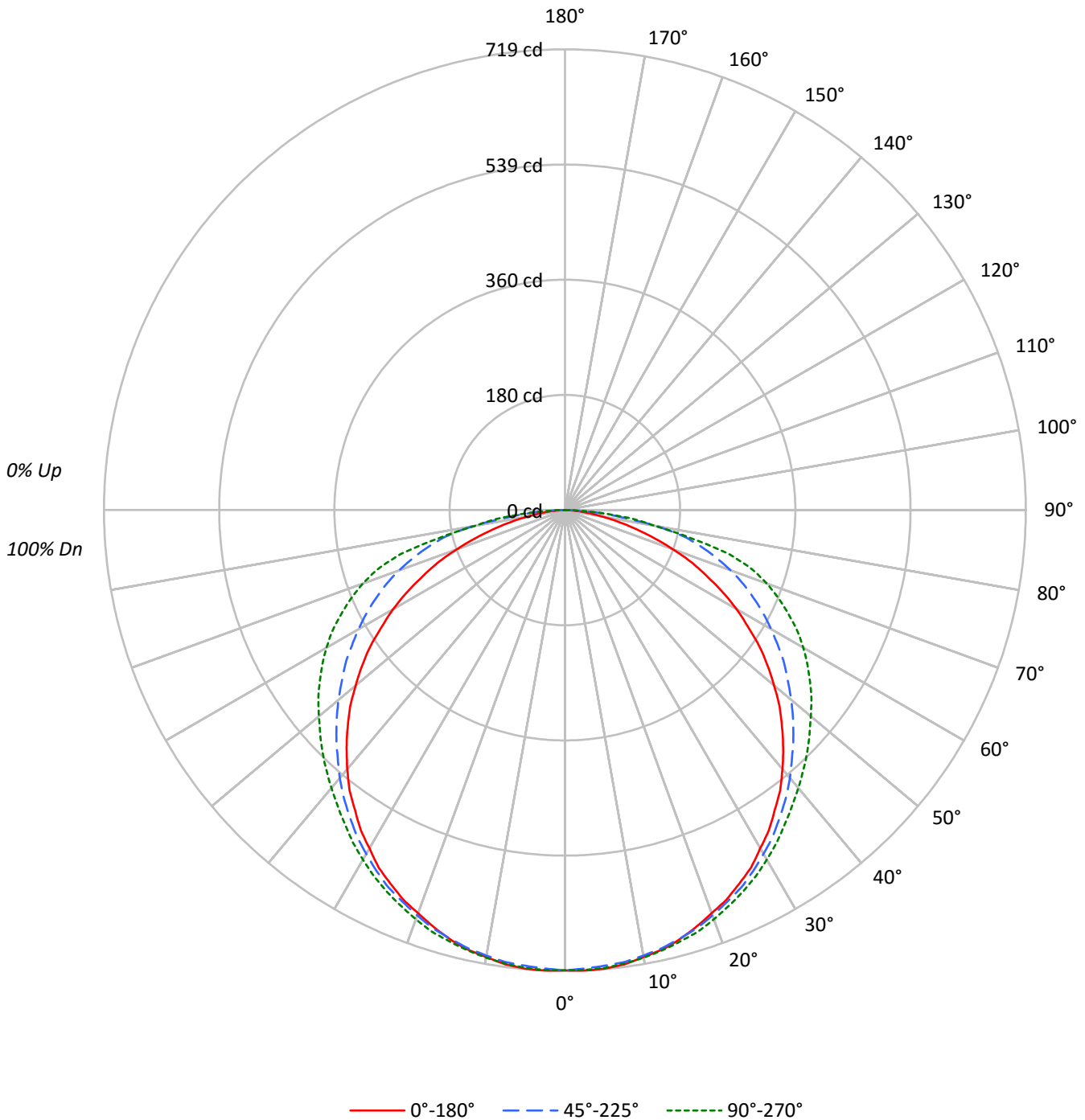
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310040

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CA08-W2A-U-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P310040

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CA08-W2A-U-2700K

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°	966	966	966
5°	970	964	969
10°	967	964	969
15°	966	964	970
20°	959	963	973
25°	955	965	976
30°	947	963	979
35°	938	960	983
40°	927	959	995
45°	912	959	1017
50°	892	965	1048
55°	869	981	1095
60°	832	1000	1156
65°	779	1035	1226
70°	709	1083	1319
75°	601	1143	1378
80°	474	1150	1115
85°	350	874	979



TEST NUMBER: P310040

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CA08-W2A-U-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.1	3.0
10°-20°	196.1	8.6
20°-30°	299.9	13.1
30°-40°	366.6	16.0
40°-50°	390.7	17.1
50°-60°	373.5	16.4
60°-70°	316.4	13.9
70°-80°	212.7	9.3
80°-90°	60.0	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°	564.1	24.7
0°-40°	930.6	40.7
0°-60°	1694.9	74.2
0°-90°	2284.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2284.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	718	718	718	718	718	
5°	718	717	714	717	717	68
15°	693	693	692	698	697	195
25°	644	646	650	656	657	297
35°	571	576	585	596	598	358
45°	479	487	504	526	535	370
55°	370	384	418	451	467	330
65°	245	270	325	368	385	243
75°	116	158	220	257	265	124
85°	23	46	57	61	63	28
90°	0	0	0	0	0	



TEST NUMBER: P310040

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CA08-W2A-U-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	718.3	718.3	718.3	718.3	718.3
2.5°	719.4	719.4	716.0	718.3	718.3
5°	718.3	717.1	713.7	717.1	717.1
7.5°	714.9	713.7	711.5	714.9	713.7
10°	708.1	708.1	705.8	709.2	709.2
12.5°	702.4	701.3	700.1	704.7	703.5
15°	693.3	693.3	692.2	697.9	696.7
17.5°	682.0	683.1	684.3	688.8	689.9
20°	669.5	671.8	672.9	679.7	679.7
22.5°	658.2	659.3	661.6	668.4	668.4
25°	643.5	645.7	650.3	655.9	657.1
27.5°	628.8	629.9	635.6	643.5	644.6
30°	609.5	612.9	619.7	628.8	629.9
32.5°	592.5	595.9	603.8	612.9	615.2
35°	571.0	575.5	584.6	595.9	598.2
37.5°	551.7	555.1	566.4	578.9	582.3
40°	527.9	534.7	546.1	560.8	566.4
42.5°	504.1	510.9	524.5	543.8	550.6
45°	479.2	487.1	504.1	525.7	534.7
47.5°	454.3	463.4	482.6	507.5	517.7
50°	426.0	437.3	461.1	489.4	500.7
52.5°	398.8	412.4	438.4	470.1	484.9
55°	370.5	384.0	418.0	450.9	466.8
57.5°	338.7	356.9	394.2	431.6	448.6
60°	309.3	326.3	371.6	412.4	429.4
62.5°	277.6	300.2	348.9	392.0	409.0
65°	244.7	269.6	325.1	368.2	385.2
67.5°	215.2	242.4	301.3	344.4	361.4
70°	180.1	214.1	275.3	318.3	335.3
72.5°	147.3	184.7	248.1	290.0	305.9
75°	115.6	157.5	219.8	257.2	265.1
77.5°	86.1	130.3	190.3	206.2	200.5
80°	61.2	104.2	148.4	140.5	143.9
82.5°	39.7	79.3	91.8	104.2	107.6
85°	22.7	46.4	56.6	61.2	63.4
87.5°	10.2	17.0	22.7	22.7	21.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)