

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: P309984

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-CP187-W2A-U-5700K**

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: P309984
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: 24FCZ2-35-UNV-L82765-RDP-CP187-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 5700K 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: 2134.0 lumens
Efficiency: N/A
Efficacy: 74.1 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

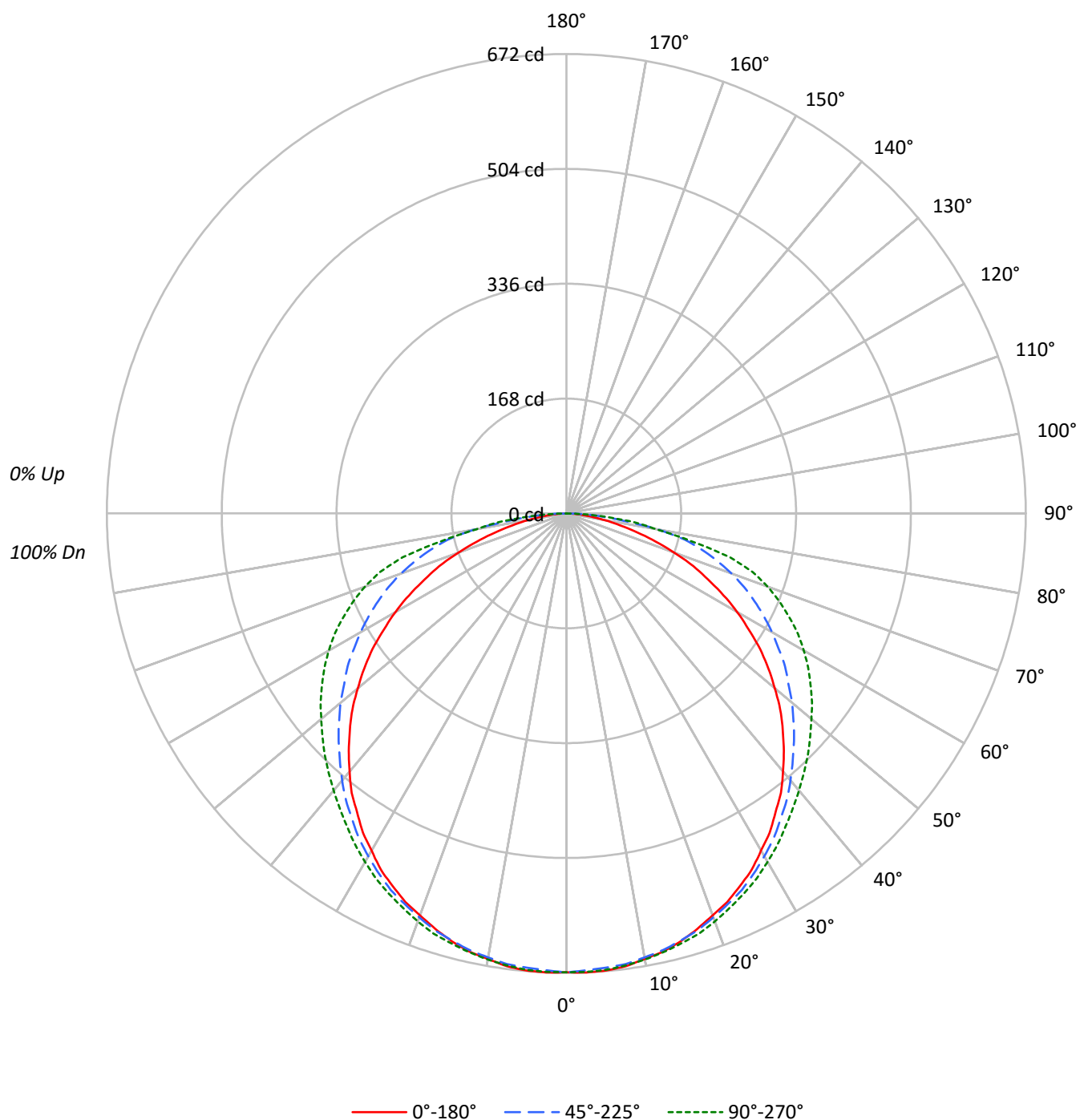
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309984

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-RDP-CP187-W2A-U-5700K

Luminous Intensity Polar Plot





TEST NUMBER: P309984

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-RDP-CP187-W2A-U-5700K

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°	903	903	903
5°	906	901	905
10°	904	901	905
15°	902	901	907
20°	896	900	909
25°	893	902	911
30°	885	900	914
35°	876	897	918
40°	866	896	929
45°	852	896	951
50°	833	902	979
55°	812	916	1023
60°	778	934	1080
65°	728	967	1146
70°	662	1012	1233
75°	561	1067	1288
80°	443	1075	1041
85°	327	817	915



TEST NUMBER: P309984

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-RDP-CP187-W2A-U-5700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.7	3.0
10°-20°	183.2	8.6
20°-30°	280.2	13.1
30°-40°	342.5	16.0
40°-50°	365.0	17.1
50°-60°	349.0	16.4
60°-70°	295.7	13.9
70°-80°	198.7	9.3
80°-90°	56.1	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°	527.0	24.7
0°-40°	869.5	40.7
0°-60°	1583.6	74.2
0°-90°	2134.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2134.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	671	671	671	671	671	
5°	671	670	667	670	670	64
15°	648	648	647	652	651	183
25°	601	603	608	613	614	277
35°	534	538	546	557	559	334
45°	448	455	471	491	500	345
55°	346	359	391	421	436	308
65°	229	252	304	344	360	227
75°	108	147	205	240	248	116
85°	21	43	53	57	59	26
90°	0	0	0	0	0	



TEST NUMBER: P309984

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-RDP-CP187-W2A-U-5700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	671.1	671.1	671.1	671.1	671.1
2.5°	672.1	672.1	669.0	671.1	671.1
5°	671.1	670.0	666.8	670.0	670.0
7.5°	667.9	666.8	664.7	667.9	666.8
10°	661.6	661.6	659.4	662.6	662.6
12.5°	656.3	655.2	654.1	658.4	657.3
15°	647.8	647.8	646.7	652.0	651.0
17.5°	637.2	638.3	639.3	643.6	644.6
20°	625.6	627.7	628.7	635.1	635.1
22.5°	615.0	616.0	618.2	624.5	624.5
25°	601.2	603.3	607.6	612.9	613.9
27.5°	587.5	588.5	593.8	601.2	602.3
30°	569.5	572.6	579.0	587.5	588.5
32.5°	553.6	556.8	564.2	572.6	574.8
35°	533.5	537.7	546.2	556.8	558.9
37.5°	515.5	518.7	529.2	540.9	544.1
40°	493.3	499.6	510.2	524.0	529.2
42.5°	471.0	477.4	490.1	508.1	514.4
45°	447.7	455.2	471.0	491.1	499.6
47.5°	424.5	432.9	450.9	474.2	483.7
50°	398.0	408.6	430.8	457.3	467.9
52.5°	372.6	385.3	409.6	439.3	453.0
55°	346.1	358.8	390.6	421.3	436.1
57.5°	316.5	333.4	368.4	403.3	419.2
60°	289.0	304.8	347.2	385.3	401.2
62.5°	259.3	280.5	326.0	366.2	382.1
65°	228.6	251.9	303.8	344.0	359.9
67.5°	201.1	226.5	281.6	321.8	337.7
70°	168.3	200.1	257.2	297.4	313.3
72.5°	137.6	172.5	231.8	271.0	285.8
75°	108.0	147.1	205.3	240.3	247.7
77.5°	80.4	121.7	177.8	192.6	187.4
80°	57.2	97.4	138.7	131.3	134.4
82.5°	37.0	74.1	85.7	97.4	100.6
85°	21.2	43.4	52.9	57.2	59.3
87.5°	9.5	15.9	21.2	21.2	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)