

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: P313805

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-CP187-W2A-U-3000K**

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: P313805
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30HE-UNV-L83050-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 3000K 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: 2482.0 lumens
Efficiency: N/A
Efficacy: 117.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

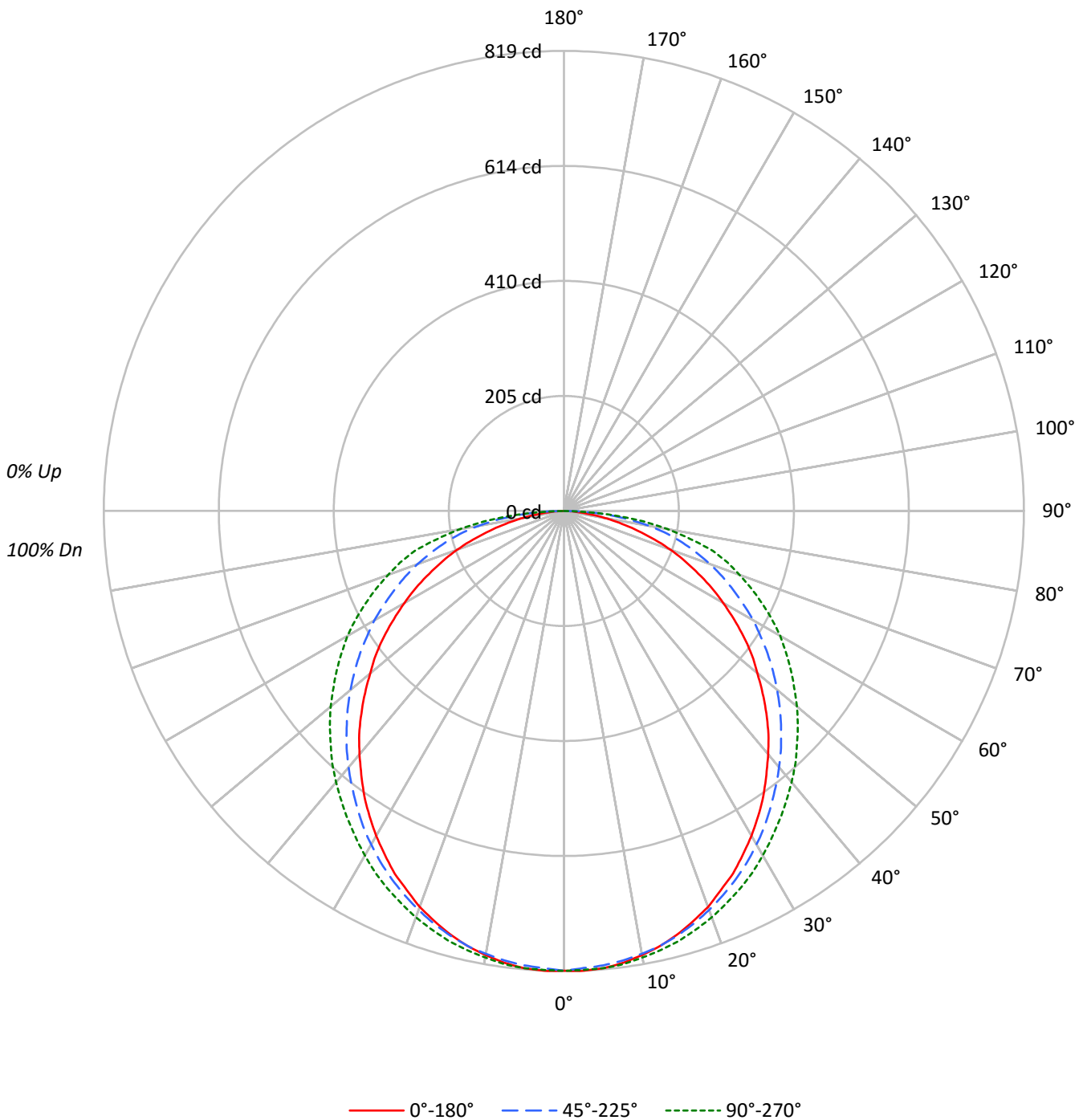
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313805

CATALOG NUMBER: 24FCZ2-30HE-UNV-L83050-CP187-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P313805

CATALOG NUMBER: 24FC22-30HE-UNV-L83050-CP187-W2A-U-3000K

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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1101	1101	1101
5°	1103	1097	1103
10°	1097	1094	1103
15°	1087	1090	1103
20°	1074	1082	1103
25°	1057	1075	1102
30°	1038	1066	1100
35°	1017	1055	1101
40°	994	1047	1108
45°	970	1040	1117
50°	941	1038	1134
55°	918	1039	1157
60°	882	1048	1197
65°	841	1059	1240
70°	797	1092	1309
75°	711	1138	1430
80°	606	1206	1461
85°	432	1195	1399



TEST NUMBER: P313805

CATALOG NUMBER: 24FCZ2-30HE-UNV-L83050-CP187-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.5	3.1
10°-20°	221.5	8.9
20°-30°	334.6	13.5
30°-40°	403.2	16.2
40°-50°	423.3	17.1
50°-60°	396.0	16.0
60°-70°	327.1	13.2
70°-80°	222.9	9.0
80°-90°	76.0	3.1
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°	633.5	25.5
0°-40°	1036.7	41.8
0°-60°	1856.1	74.8
0°-90°	2482.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2482.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	817	816	812	817	817	78
15°	781	782	782	790	792	220
25°	712	716	724	738	742	328
35°	619	626	642	664	670	387
45°	510	520	547	576	587	393
55°	391	407	443	479	493	349
65°	264	287	333	375	390	262
75°	137	168	219	260	275	146
85°	28	55	77	87	91	35
90°	0	0	0	0	0	



TEST NUMBER: P313805

CATALOG NUMBER: 24FCZ2-30HE-UNV-L83050-CP187-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	818.5	818.5	818.5	818.5	818.5
2.5°	819.4	818.5	814.4	818.5	817.7
5°	816.9	816.1	812.0	816.9	816.9
7.5°	811.1	811.1	807.0	812.8	813.6
10°	802.9	802.9	800.4	807.0	807.0
12.5°	793.0	793.0	793.0	799.6	800.4
15°	780.7	781.5	782.3	790.5	792.2
17.5°	765.8	767.5	770.0	779.8	781.5
20°	750.2	751.8	756.0	767.5	770.0
22.5°	730.4	734.5	740.3	753.5	756.0
25°	712.3	715.6	723.8	737.8	742.0
27.5°	690.1	695.0	705.7	720.5	726.3
30°	667.8	672.8	686.0	703.3	708.2
32.5°	644.0	651.4	665.4	683.5	689.3
35°	619.3	625.8	642.3	663.7	670.3
37.5°	592.1	601.1	619.3	642.3	650.6
40°	565.7	575.6	596.2	620.9	630.8
42.5°	539.4	549.3	572.3	600.3	610.2
45°	509.7	520.4	546.8	576.4	587.1
47.5°	480.1	493.3	522.1	553.4	564.9
50°	449.6	464.4	495.7	528.7	541.9
52.5°	422.4	436.4	469.4	504.8	517.1
55°	391.2	406.8	443.0	479.3	493.3
57.5°	359.0	376.3	415.0	454.6	468.6
60°	327.7	346.7	389.5	429.0	444.7
62.5°	297.3	316.2	360.7	401.9	417.5
65°	264.3	286.6	332.7	374.7	389.5
67.5°	233.0	256.9	305.5	346.7	361.5
70°	202.6	225.6	277.5	317.9	332.7
72.5°	169.6	196.0	247.9	289.9	305.5
75°	136.7	168.0	219.0	260.2	275.0
77.5°	106.2	138.3	189.4	223.2	230.6
80°	78.2	111.2	155.6	179.5	188.6
82.5°	50.2	83.2	118.6	135.9	143.3
85°	28.0	55.2	77.4	87.3	90.6
87.5°	11.5	23.9	31.3	35.4	35.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)