

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: P310518

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-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: P310518
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-L82765-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: 2479.0 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

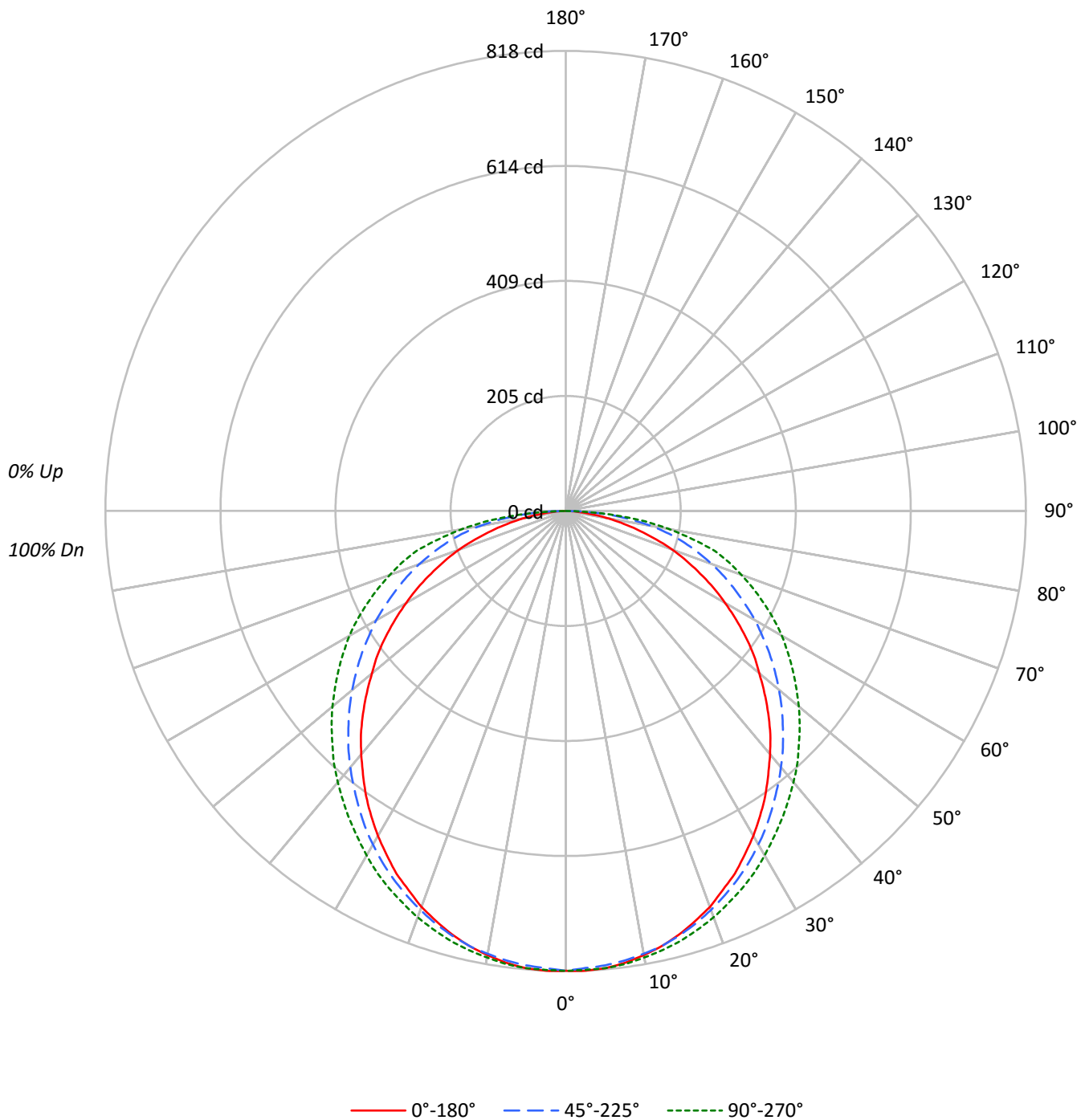
Input Watts (W): 21
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1100	1100	1100
5°	1102	1095	1102
10°	1096	1092	1101
15°	1086	1088	1102
20°	1073	1081	1101
25°	1056	1073	1100
30°	1036	1064	1099
35°	1016	1054	1100
40°	992	1046	1107
45°	969	1039	1116
50°	940	1036	1133
55°	916	1038	1156
60°	881	1047	1195
65°	840	1058	1238
70°	796	1090	1307
75°	710	1137	1428
80°	605	1205	1459
85°	432	1193	1397



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	3.1
10°-20°	221.2	8.9
20°-30°	334.2	13.5
30°-40°	402.7	16.2
40°-50°	422.8	17.1
50°-60°	395.5	16.0
60°-70°	326.6	13.2
70°-80°	222.6	9.0
80°-90°	75.9	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°	632.8	25.5
0°-40°	1035.5	41.8
0°-60°	1853.8	74.8
0°-90°	2479.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2479.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	816	815	811	816	816	77
15°	780	780	781	790	791	220
25°	712	715	723	737	741	327
35°	618	625	642	663	670	387
45°	509	520	546	576	586	393
55°	391	406	442	479	493	349
65°	264	286	332	374	389	262
75°	136	168	219	260	275	146
85°	28	55	77	87	90	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	817.6	817.6	817.6	817.6	817.6
2.5°	818.4	817.6	813.4	817.6	816.7
5°	815.9	815.1	811.0	815.9	815.9
7.5°	810.2	810.2	806.0	811.8	812.6
10°	801.9	801.9	799.5	806.0	806.0
12.5°	792.1	792.1	792.1	798.6	799.5
15°	779.7	780.5	781.4	789.6	791.2
17.5°	764.9	766.6	769.0	778.9	780.5
20°	749.3	750.9	755.0	766.6	769.0
22.5°	729.5	733.7	739.4	752.6	755.0
25°	711.5	714.7	723.0	736.9	741.1
27.5°	689.2	694.2	704.9	719.7	725.4
30°	667.0	672.0	685.1	702.4	707.3
32.5°	643.2	650.6	664.6	682.7	688.4
35°	618.5	625.1	641.5	662.9	669.5
37.5°	591.4	600.4	618.5	641.5	649.8
40°	565.0	574.9	595.5	620.2	630.0
42.5°	538.7	548.6	571.6	599.6	609.5
45°	509.1	519.8	546.1	575.7	586.4
47.5°	479.5	492.7	521.5	552.7	564.2
50°	449.1	463.9	495.1	528.0	541.2
52.5°	421.9	435.9	468.8	504.2	516.5
55°	390.7	406.3	442.5	478.7	492.7
57.5°	358.6	375.9	414.5	454.0	468.0
60°	327.4	346.3	389.0	428.5	444.1
62.5°	296.9	315.8	360.2	401.4	417.0
65°	264.0	286.2	332.3	374.2	389.0
67.5°	232.8	256.6	305.1	346.3	361.1
70°	202.3	225.4	277.2	317.5	332.3
72.5°	169.4	195.8	247.6	289.5	305.1
75°	136.5	167.8	218.8	259.9	274.7
77.5°	106.1	138.2	189.2	222.9	230.3
80°	78.1	111.0	155.5	179.3	188.3
82.5°	50.2	83.1	118.4	135.7	143.1
85°	28.0	55.1	77.3	87.2	90.5
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)