

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: P309170

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CP187-W2A-U-4000K**

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: P309170
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: 24FCZ2-30HE-UNV-L82765-HRP-CP187-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 4000K 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: 1987.9 lumens
Efficiency: N/A
Efficacy: 93.3 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

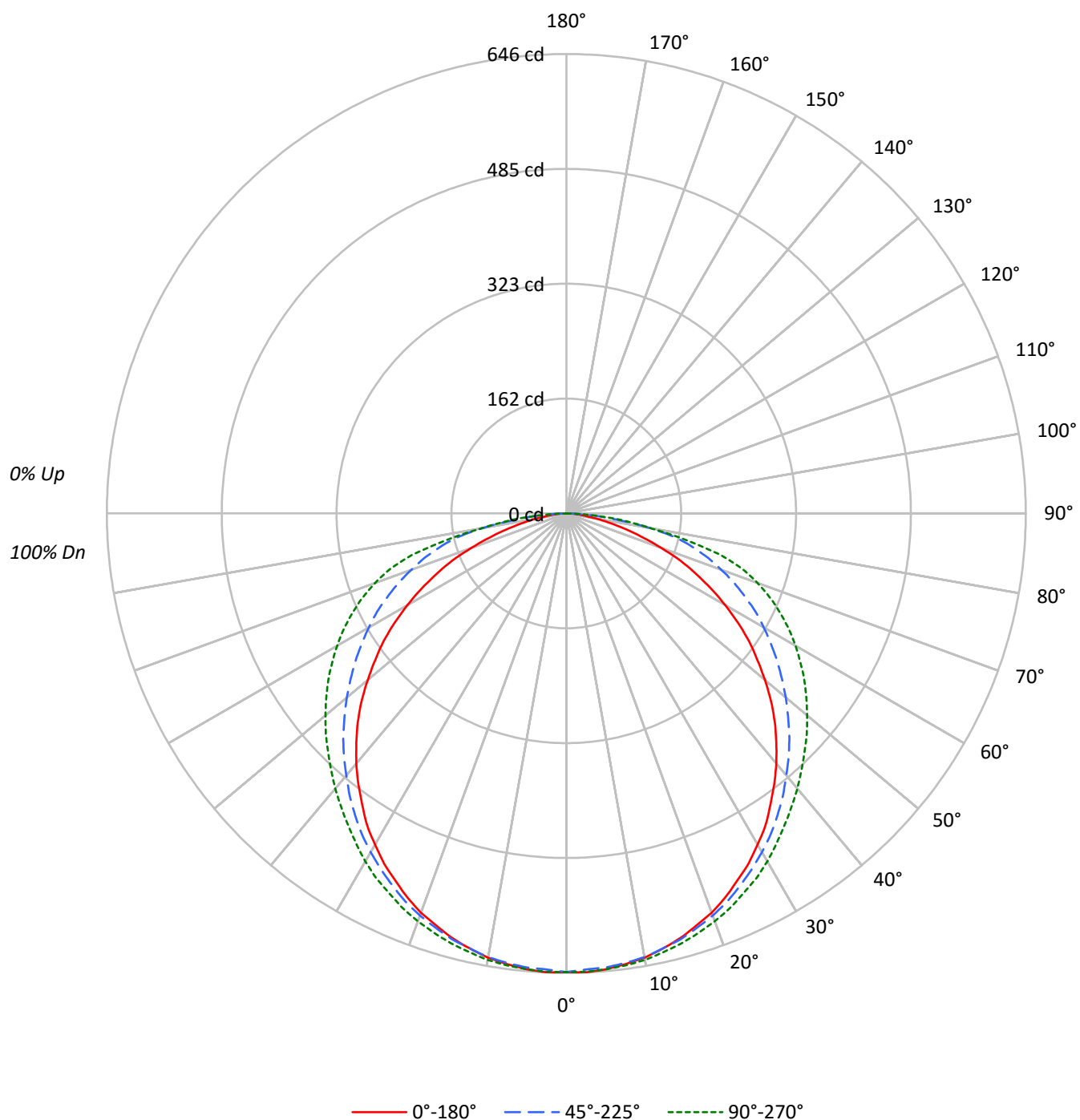
Input Watts (W): 21.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	868	868	868
5°	869	865	869
10°	866	865	871
15°	861	864	872
20°	856	862	874
25°	845	857	875
30°	835	855	878
35°	822	850	879
40°	807	845	887
45°	789	844	901
50°	763	843	925
55°	736	849	958
60°	694	862	1001
65°	641	882	1057
70°	560	913	1126
75°	454	961	1164
80°	336	941	941
85°	256	693	784



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.1	3.1
10°-20°	175.5	8.8
20°-30°	267.1	13.4
30°-40°	324.3	16.3
40°-50°	342.7	17.2
50°-60°	323.3	16.3
60°-70°	268.8	13.5
70°-80°	176.9	8.9
80°-90°	48.2	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°	503.7	25.3
0°-40°	828.0	41.7
0°-60°	1494.0	75.2
0°-90°	1987.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1987.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	645	645	645	645	645	
5°	643	643	641	643	643	61
15°	618	619	620	626	626	174
25°	569	573	578	588	589	263
35°	500	506	518	531	535	313
45°	414	423	444	465	474	319
55°	314	327	362	396	409	279
65°	201	225	277	318	332	199
75°	87	127	185	219	224	94
85°	17	37	45	50	51	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	645.0	645.0	645.0	645.0	645.0
2.5°	645.8	645.0	641.7	645.0	645.0
5°	643.3	643.3	640.8	643.3	643.3
7.5°	639.2	639.2	637.5	640.8	640.8
10°	634.2	634.2	633.4	637.5	637.5
12.5°	626.7	627.5	626.7	631.7	631.7
15°	618.4	619.2	620.0	625.9	625.9
17.5°	607.6	609.2	610.9	617.5	618.4
20°	597.6	598.4	601.7	609.2	610.1
22.5°	584.3	586.7	590.9	598.4	600.9
25°	569.3	572.6	577.6	587.6	589.2
27.5°	555.1	557.6	564.3	575.1	578.4
30°	537.6	541.8	550.1	560.9	565.1
32.5°	521.0	525.2	535.1	546.8	550.1
35°	500.2	506.0	517.7	531.0	535.1
37.5°	480.2	486.0	500.2	515.2	520.2
40°	459.4	466.1	481.1	498.5	505.2
42.5°	436.9	446.1	462.7	481.9	489.4
45°	414.5	422.8	443.6	465.2	473.6
47.5°	390.3	400.3	422.8	448.6	458.6
50°	364.5	377.0	402.8	431.1	441.9
52.5°	338.7	352.9	382.0	413.6	425.3
55°	313.8	327.1	362.0	396.2	408.6
57.5°	286.3	302.9	341.2	377.8	390.3
60°	258.0	276.3	320.4	358.7	372.0
62.5°	229.7	250.5	300.4	338.7	352.9
65°	201.4	224.7	277.1	317.9	332.1
67.5°	173.9	199.7	255.5	296.3	310.4
70°	142.3	174.8	232.2	272.2	286.3
72.5°	113.2	150.6	209.7	247.2	259.7
75°	87.4	127.3	184.8	218.9	223.9
77.5°	64.1	104.0	159.0	170.6	171.4
80°	43.3	83.2	121.5	119.8	121.5
82.5°	28.3	62.4	76.6	85.7	86.6
85°	16.6	36.6	44.9	49.9	50.8
87.5°	8.3	12.5	15.8	16.6	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)