

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: P309937

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CP187-W2A-U-5000K**

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: P309937
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: 24FCZ2-35HE-UNV-L82765-RDP-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 5000K 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: 2085.0 lumens
Efficiency: N/A
Efficacy: 78.4 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

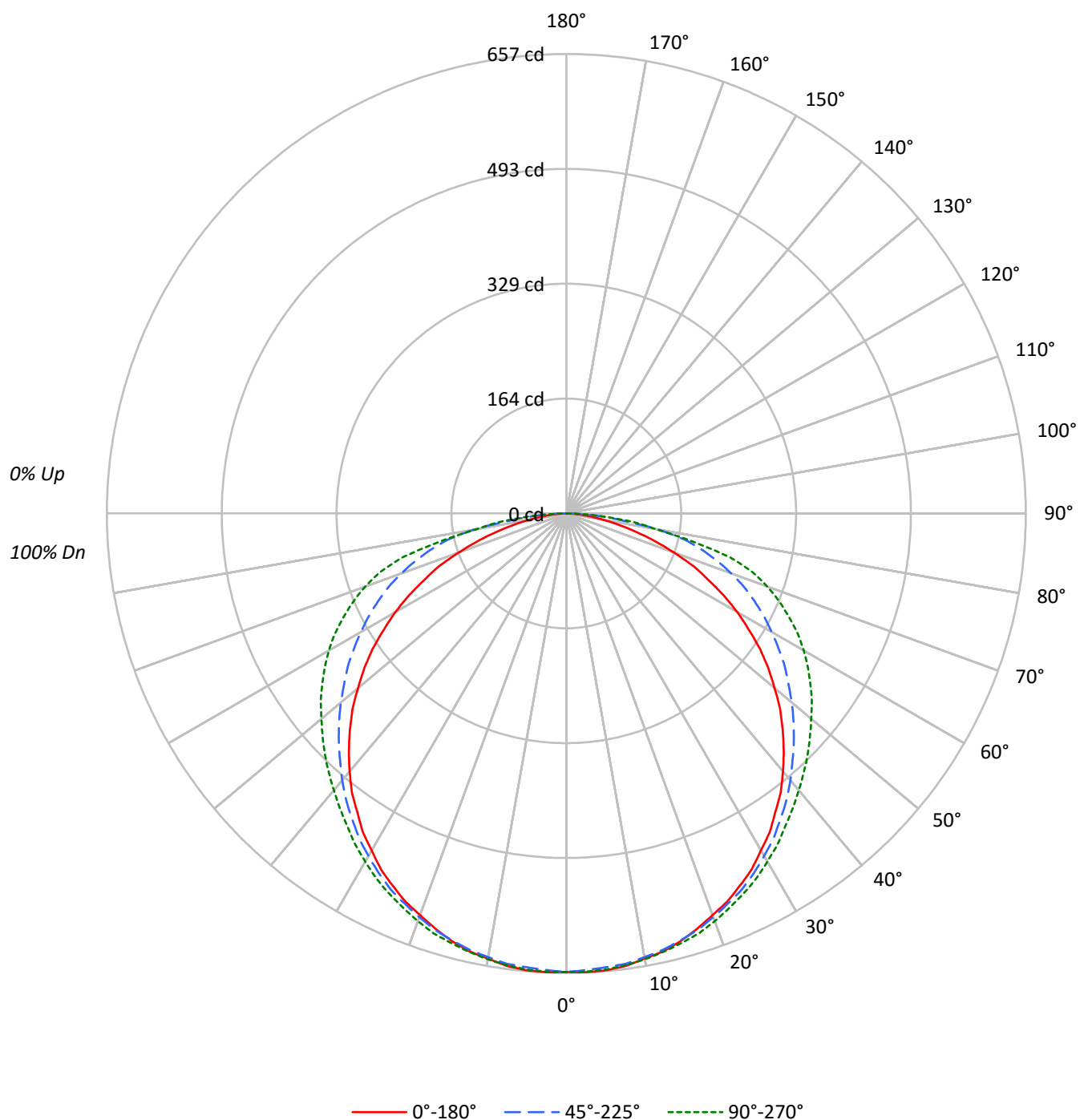
Input Watts (W): 26.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	68	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°	882	882	882
5°	886	880	884
10°	883	880	885
15°	882	880	886
20°	875	880	888
25°	872	881	890
30°	864	879	893
35°	856	876	897
40°	846	876	908
45°	832	876	929
50°	814	881	957
55°	793	895	1000
60°	760	913	1055
65°	711	945	1119
70°	647	989	1204
75°	548	1043	1258
80°	432	1050	1017
85°	320	798	894



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.2	3.0
10°-20°	179.0	8.6
20°-30°	273.7	13.1
30°-40°	334.6	16.0
40°-50°	356.6	17.1
50°-60°	341.0	16.4
60°-70°	288.9	13.9
70°-80°	194.1	9.3
80°-90°	54.8	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°	514.9	24.7
0°-40°	849.6	40.7
0°-60°	1547.2	74.2
0°-90°	2085.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2085.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	656	656	656	656	656	
5°	656	655	652	655	655	62
15°	633	633	632	637	636	178
25°	587	590	594	599	600	271
35°	521	525	534	544	546	327
45°	438	445	460	480	488	337
55°	338	351	382	412	426	301
65°	223	246	297	336	352	222
75°	106	144	201	235	242	113
85°	21	42	52	56	58	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	655.7	655.7	655.7	655.7	655.7
2.5°	656.7	656.7	653.6	655.7	655.7
5°	655.7	654.6	651.5	654.6	654.6
7.5°	652.6	651.5	649.5	652.6	651.5
10°	646.4	646.4	644.3	647.4	647.4
12.5°	641.2	640.2	639.1	643.3	642.2
15°	632.9	632.9	631.9	637.1	636.0
17.5°	622.6	623.6	624.6	628.8	629.8
20°	611.2	613.3	614.3	620.5	620.5
22.5°	600.9	601.9	604.0	610.2	610.2
25°	587.4	589.5	593.6	598.8	599.8
27.5°	574.0	575.0	580.2	587.4	588.5
30°	556.4	559.5	565.7	574.0	575.0
32.5°	540.9	544.0	551.2	559.5	561.6
35°	521.2	525.4	533.6	544.0	546.0
37.5°	503.6	506.8	517.1	528.5	531.6
40°	481.9	488.1	498.5	511.9	517.1
42.5°	460.2	466.4	478.8	496.4	502.6
45°	437.5	444.7	460.2	479.9	488.1
47.5°	414.7	423.0	440.6	463.3	472.6
50°	388.9	399.2	420.9	446.8	457.1
52.5°	364.0	376.4	400.2	429.2	442.6
55°	338.2	350.6	381.6	411.6	426.1
57.5°	309.2	325.8	359.9	394.0	409.5
60°	282.3	297.8	339.2	376.4	392.0
62.5°	253.4	274.1	318.5	357.8	373.3
65°	223.4	246.1	296.8	336.1	351.6
67.5°	196.5	221.3	275.1	314.4	329.9
70°	164.4	195.5	251.3	290.6	306.1
72.5°	134.4	168.6	226.5	264.8	279.2
75°	105.5	143.8	200.6	234.8	242.0
77.5°	78.6	118.9	173.7	188.2	183.1
80°	55.8	95.1	135.5	128.2	131.3
82.5°	36.2	72.4	83.8	95.1	98.2
85°	20.7	42.4	51.7	55.8	57.9
87.5°	9.3	15.5	20.7	20.7	19.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)