

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: P313473

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CA125-W2A-U-4500K**

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: P313473
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-L83050-RDP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 2286.0 lumens
Efficiency: N/A
Efficacy: 83.7 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

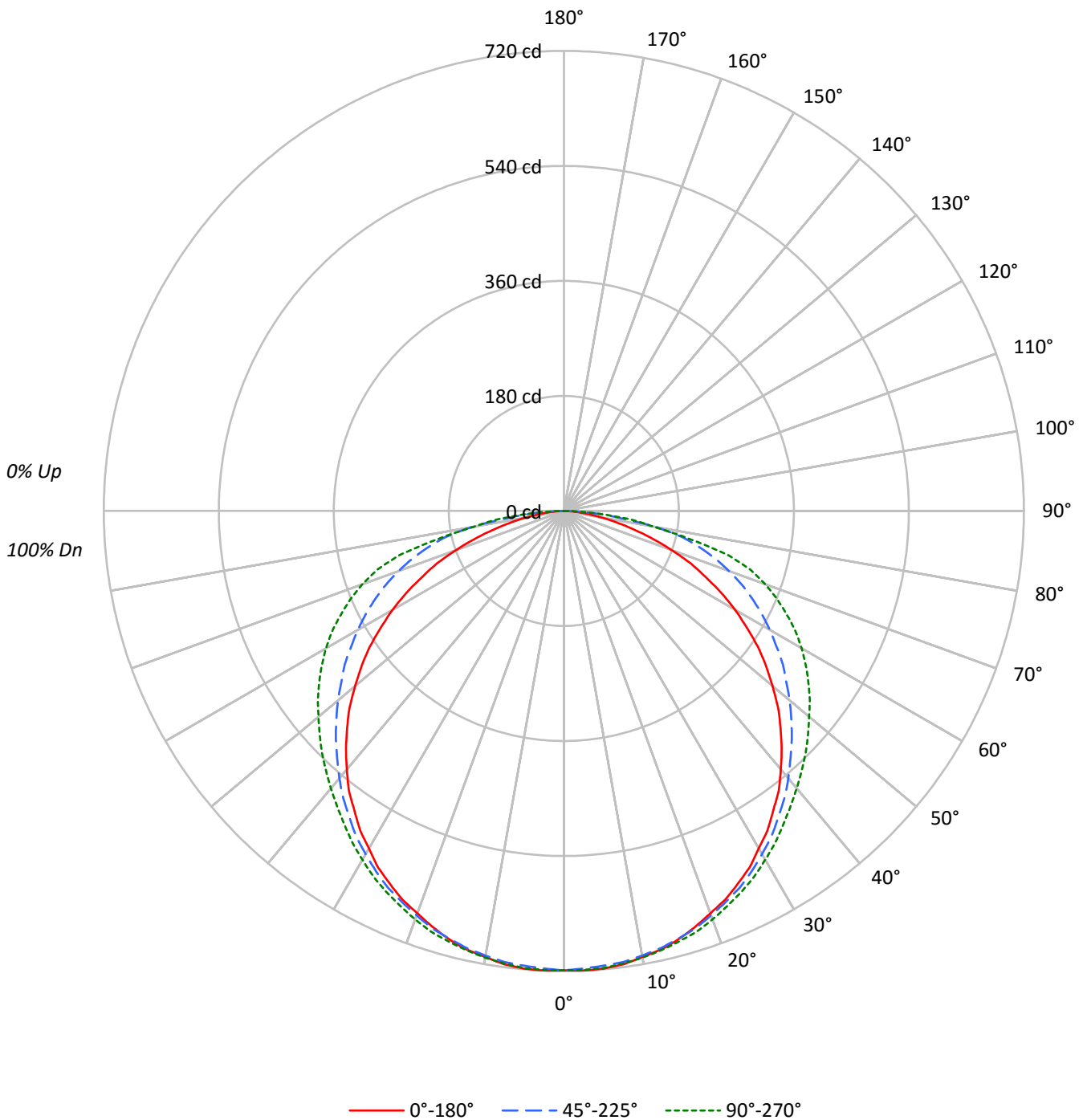
Input Watts (W): 27.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	967	967	967
5°	971	965	969
10°	968	965	970
15°	967	965	971
20°	959	964	974
25°	956	966	976
30°	948	964	979
35°	939	961	983
40°	928	960	996
45°	913	960	1018
50°	892	966	1049
55°	870	981	1096
60°	833	1001	1156
65°	780	1036	1227
70°	709	1084	1320
75°	601	1144	1379
80°	474	1151	1116
85°	350	875	980



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.2	3.0
10°-20°	196.3	8.6
20°-30°	300.1	13.1
30°-40°	366.9	16.0
40°-50°	391.0	17.1
50°-60°	373.9	16.4
60°-70°	316.7	13.9
70°-80°	212.9	9.3
80°-90°	60.0	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°	564.6	24.7
0°-40°	931.4	40.7
0°-60°	1696.4	74.2
0°-90°	2286.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2286.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	719	719	719	719	719	
5°	719	718	714	718	718	68
15°	694	694	693	698	697	196
25°	644	646	651	656	658	297
35°	572	576	585	596	599	358
45°	480	488	505	526	535	370
55°	371	384	418	451	467	330
65°	245	270	325	368	386	243
75°	116	158	220	257	265	124
85°	23	46	57	61	64	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	718.9	718.9	718.9	718.9	718.9
2.5°	720.0	720.0	716.6	718.9	718.9
5°	718.9	717.7	714.3	717.7	717.7
7.5°	715.5	714.3	712.1	715.5	714.3
10°	708.7	708.7	706.4	709.8	709.8
12.5°	703.0	701.9	700.7	705.3	704.1
15°	693.9	693.9	692.8	698.5	697.3
17.5°	682.6	683.7	684.9	689.4	690.5
20°	670.1	672.4	673.5	680.3	680.3
22.5°	658.8	659.9	662.2	669.0	669.0
25°	644.0	646.3	650.8	656.5	657.7
27.5°	629.3	630.4	636.1	644.0	645.2
30°	610.0	613.4	620.2	629.3	630.4
32.5°	593.0	596.4	604.4	613.4	615.7
35°	571.5	576.0	585.1	596.4	598.7
37.5°	552.2	555.6	566.9	579.4	582.8
40°	528.4	535.2	546.5	561.3	566.9
42.5°	504.6	511.4	525.0	544.3	551.1
45°	479.6	487.6	504.6	526.1	535.2
47.5°	454.7	463.8	483.0	508.0	518.2
50°	426.3	437.7	461.5	489.8	501.2
52.5°	399.1	412.7	438.8	470.6	485.3
55°	370.8	384.4	418.4	451.3	467.2
57.5°	339.0	357.2	394.6	432.0	449.0
60°	309.6	326.6	371.9	412.7	429.7
62.5°	277.8	300.5	349.2	392.3	409.3
65°	244.9	269.9	325.4	368.5	385.5
67.5°	215.4	242.7	301.6	344.7	361.7
70°	180.3	214.3	275.5	318.6	335.6
72.5°	147.4	184.8	248.3	290.3	306.1
75°	115.7	157.6	220.0	257.4	265.3
77.5°	86.2	130.4	190.5	206.4	200.7
80°	61.2	104.3	148.5	140.6	144.0
82.5°	39.7	79.4	91.8	104.3	107.7
85°	22.7	46.5	56.7	61.2	63.5
87.5°	10.2	17.0	22.7	22.7	21.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)