

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: P309907

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CA08-W2A-U-3500K**

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: P309907
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-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 2113.0 lumens
Efficiency: N/A
Efficacy: 81.0 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

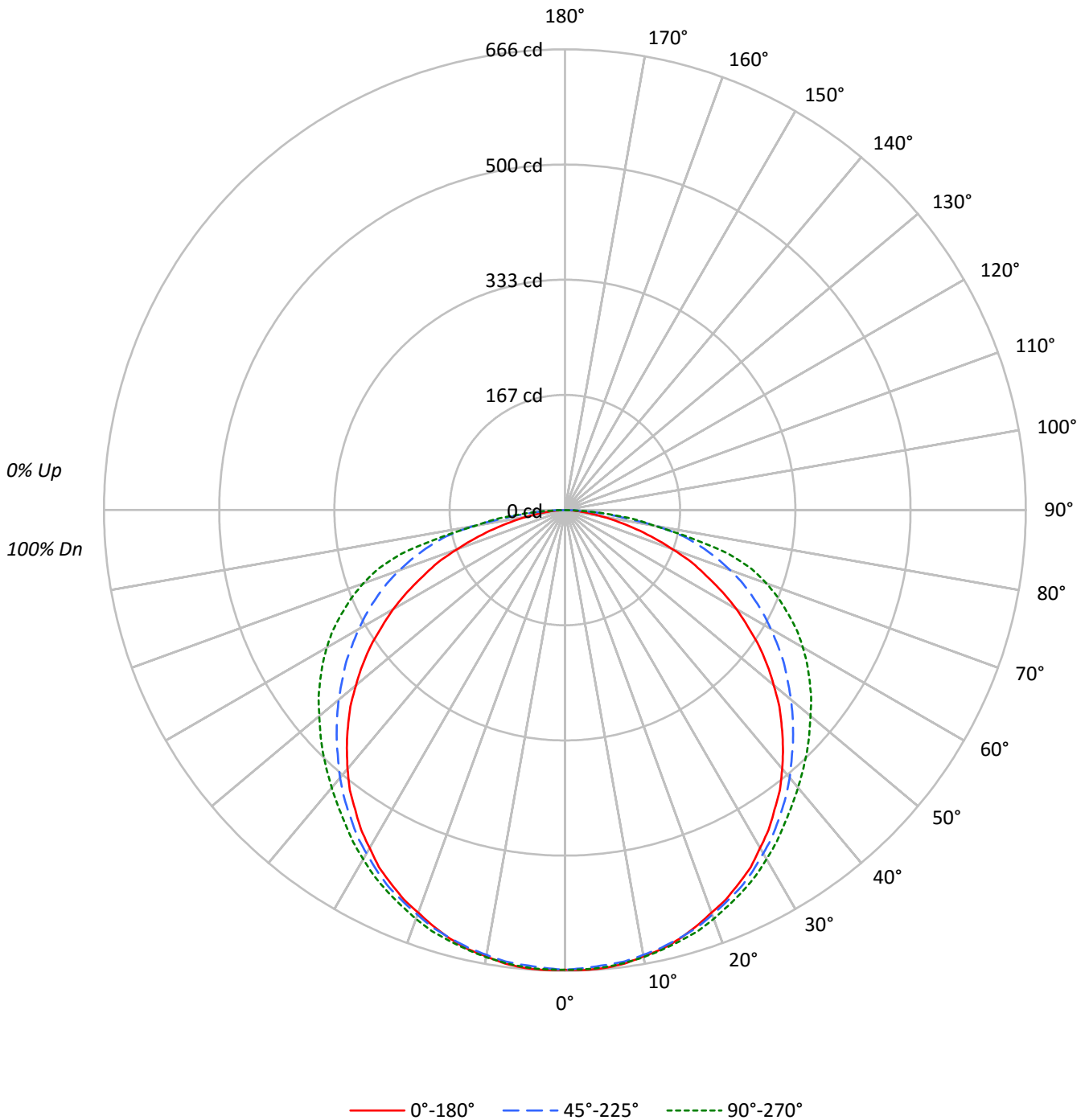
Input Watts (W): 26.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	894	894	894
5°	897	892	896
10°	895	892	896
15°	893	892	898
20°	887	891	900
25°	884	893	902
30°	876	891	905
35°	868	888	909
40°	858	887	920
45°	844	887	941
50°	825	893	970
55°	804	907	1013
60°	770	925	1069
65°	721	958	1134
70°	655	1002	1220
75°	556	1057	1275
80°	439	1064	1031
85°	324	809	906



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	3.0
10°-20°	181.4	8.6
20°-30°	277.4	13.1
30°-40°	339.1	16.0
40°-50°	361.5	17.1
50°-60°	345.6	16.4
60°-70°	292.7	13.9
70°-80°	196.7	9.3
80°-90°	55.5	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°	521.8	24.7
0°-40°	861.0	40.7
0°-60°	1568.0	74.2
0°-90°	2113.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2113.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	664	663	660	663	663	63
15°	641	641	640	646	645	181
25°	595	597	602	607	608	274
35°	528	532	541	551	553	331
45°	443	451	466	486	495	342
55°	343	355	387	417	432	305
65°	226	249	301	341	356	225
75°	107	146	203	238	245	114
85°	21	43	52	57	59	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	664.5	664.5	664.5	664.5	664.5
2.5°	665.5	665.5	662.4	664.5	664.5
5°	664.5	663.4	660.3	663.4	663.4
7.5°	661.3	660.3	658.2	661.3	660.3
10°	655.0	655.0	652.9	656.1	656.1
12.5°	649.8	648.8	647.7	651.9	650.9
15°	641.4	641.4	640.4	645.6	644.6
17.5°	630.9	632.0	633.0	637.2	638.3
20°	619.4	621.5	622.6	628.8	628.8
22.5°	608.9	610.0	612.1	618.4	618.4
25°	595.3	597.4	601.6	606.8	607.9
27.5°	581.7	582.7	588.0	595.3	596.4
30°	563.9	567.0	573.3	581.7	582.7
32.5°	548.1	551.3	558.6	567.0	569.1
35°	528.2	532.4	540.8	551.3	553.4
37.5°	510.4	513.6	524.0	535.6	538.7
40°	488.4	494.7	505.2	518.8	524.0
42.5°	466.4	472.7	485.3	503.1	509.4
45°	443.3	450.7	466.4	486.3	494.7
47.5°	420.3	428.7	446.5	469.5	479.0
50°	394.1	404.6	426.6	452.8	463.2
52.5°	368.9	381.5	405.6	435.0	448.6
55°	342.7	355.3	386.7	417.1	431.8
57.5°	313.4	330.1	364.7	399.3	415.0
60°	286.1	301.8	343.8	381.5	397.2
62.5°	256.8	277.7	322.8	362.6	378.4
65°	226.4	249.4	300.8	340.6	356.3
67.5°	199.1	224.3	278.8	318.6	334.3
70°	166.6	198.1	254.7	294.5	310.2
72.5°	136.2	170.8	229.5	268.3	283.0
75°	106.9	145.7	203.3	237.9	245.2
77.5°	79.7	120.5	176.1	190.7	185.5
80°	56.6	96.4	137.3	130.0	133.1
82.5°	36.7	73.4	84.9	96.4	99.6
85°	21.0	43.0	52.4	56.6	58.7
87.5°	9.4	15.7	21.0	21.0	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)