

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: P313487

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CP250-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: P313487
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-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 2109.0 lumens
Efficiency: N/A
Efficacy: 79.3 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

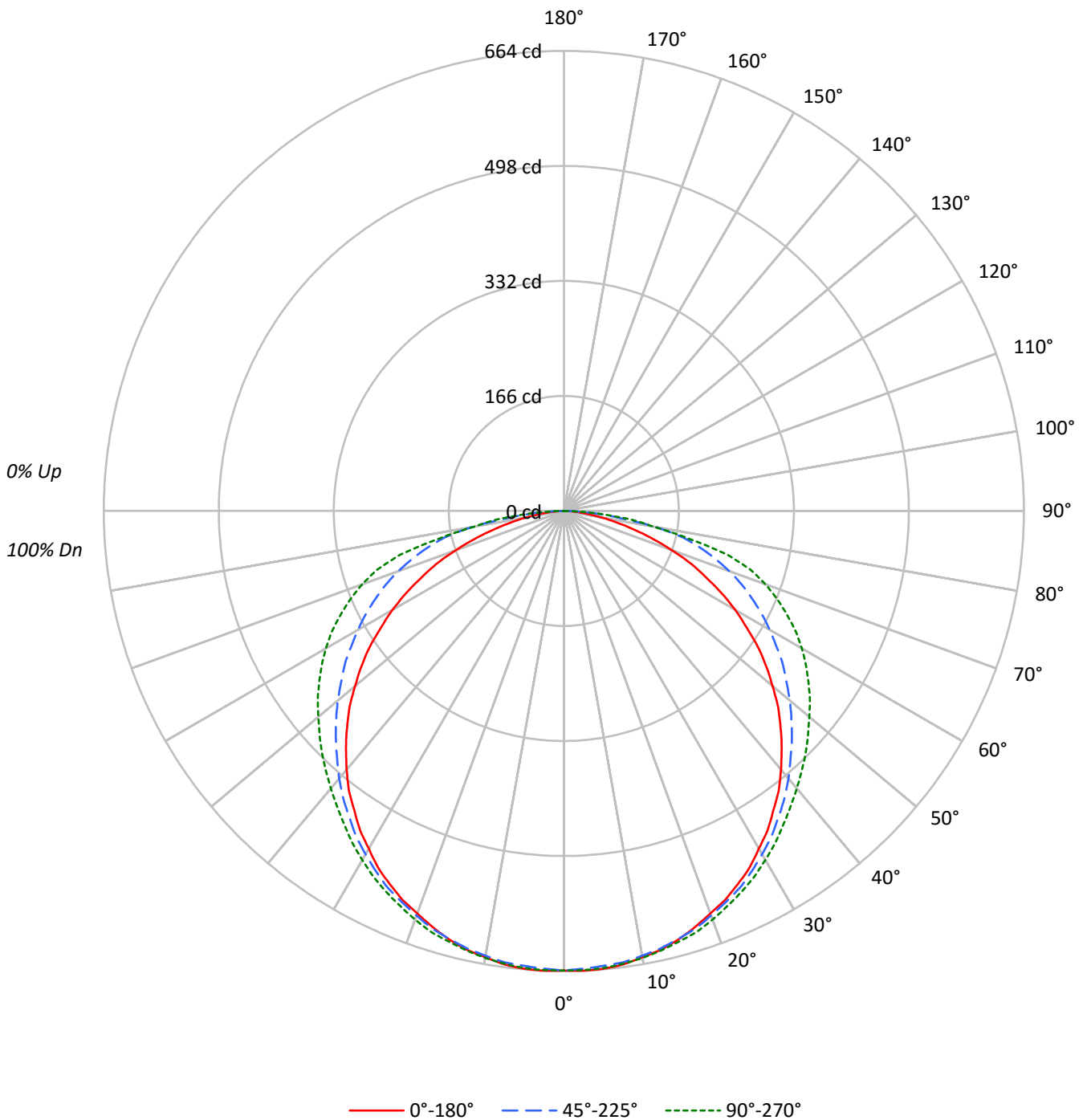
Input Watts (W): 26.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	892	892	892
5°	896	890	894
10°	893	890	895
15°	892	890	896
20°	885	890	899
25°	882	891	901
30°	874	889	904
35°	866	887	907
40°	856	886	919
45°	842	886	940
50°	823	891	968
55°	802	905	1011
60°	769	923	1067
65°	720	956	1132
70°	654	1000	1218
75°	555	1055	1273
80°	438	1062	1030
85°	323	807	905



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	3.0
10°-20°	181.1	8.6
20°-30°	276.9	13.1
30°-40°	338.5	16.0
40°-50°	360.8	17.1
50°-60°	344.9	16.4
60°-70°	292.2	13.9
70°-80°	196.4	9.3
80°-90°	55.4	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°	520.9	24.7
0°-40°	859.3	40.7
0°-60°	1565.0	74.2
0°-90°	2109.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2109.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	663	663	663	663	663	
5°	663	662	659	662	662	63
15°	640	640	639	644	643	181
25°	594	596	600	606	607	274
35°	527	531	540	550	552	330
45°	442	450	466	485	494	341
55°	342	355	386	416	431	305
65°	226	249	300	340	356	224
75°	107	145	203	238	245	114
85°	21	43	52	56	59	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	663.2	663.2	663.2	663.2	663.2
2.5°	664.3	664.3	661.1	663.2	663.2
5°	663.2	662.2	659.0	662.2	662.2
7.5°	660.1	659.0	656.9	660.1	659.0
10°	653.8	653.8	651.7	654.9	654.9
12.5°	648.6	647.5	646.5	650.7	649.6
15°	640.2	640.2	639.2	644.4	643.3
17.5°	629.7	630.8	631.8	636.0	637.1
20°	618.2	620.3	621.4	627.7	627.7
22.5°	607.8	608.8	610.9	617.2	617.2
25°	594.2	596.3	600.5	605.7	606.7
27.5°	580.6	581.6	586.9	594.2	595.2
30°	562.8	565.9	572.2	580.6	581.6
32.5°	547.1	550.2	557.6	565.9	568.0
35°	527.2	531.4	539.8	550.2	552.3
37.5°	509.4	512.6	523.0	534.6	537.7
40°	487.5	493.8	504.2	517.8	523.0
42.5°	465.5	471.8	484.3	502.1	508.4
45°	442.5	449.8	465.5	485.4	493.8
47.5°	419.5	427.9	445.6	468.6	478.1
50°	393.3	403.8	425.8	451.9	462.4
52.5°	368.2	380.8	404.8	434.1	447.7
55°	342.1	354.6	386.0	416.3	431.0
57.5°	312.8	329.5	364.0	398.6	414.3
60°	285.6	301.3	343.1	380.8	396.5
62.5°	256.3	277.2	322.2	361.9	377.6
65°	226.0	249.0	300.2	340.0	355.7
67.5°	198.8	223.9	278.3	318.0	333.7
70°	166.3	197.7	254.2	294.0	309.6
72.5°	136.0	170.5	229.1	267.8	282.4
75°	106.7	145.4	202.9	237.5	244.8
77.5°	79.5	120.3	175.7	190.4	185.2
80°	56.5	96.2	137.0	129.7	132.9
82.5°	36.6	73.2	84.7	96.2	99.4
85°	20.9	42.9	52.3	56.5	58.6
87.5°	9.4	15.7	20.9	20.9	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)