

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: P313477

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CP125-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: P313477
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" 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: 2220.0 lumens
Efficiency: N/A
Efficacy: 83.5 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

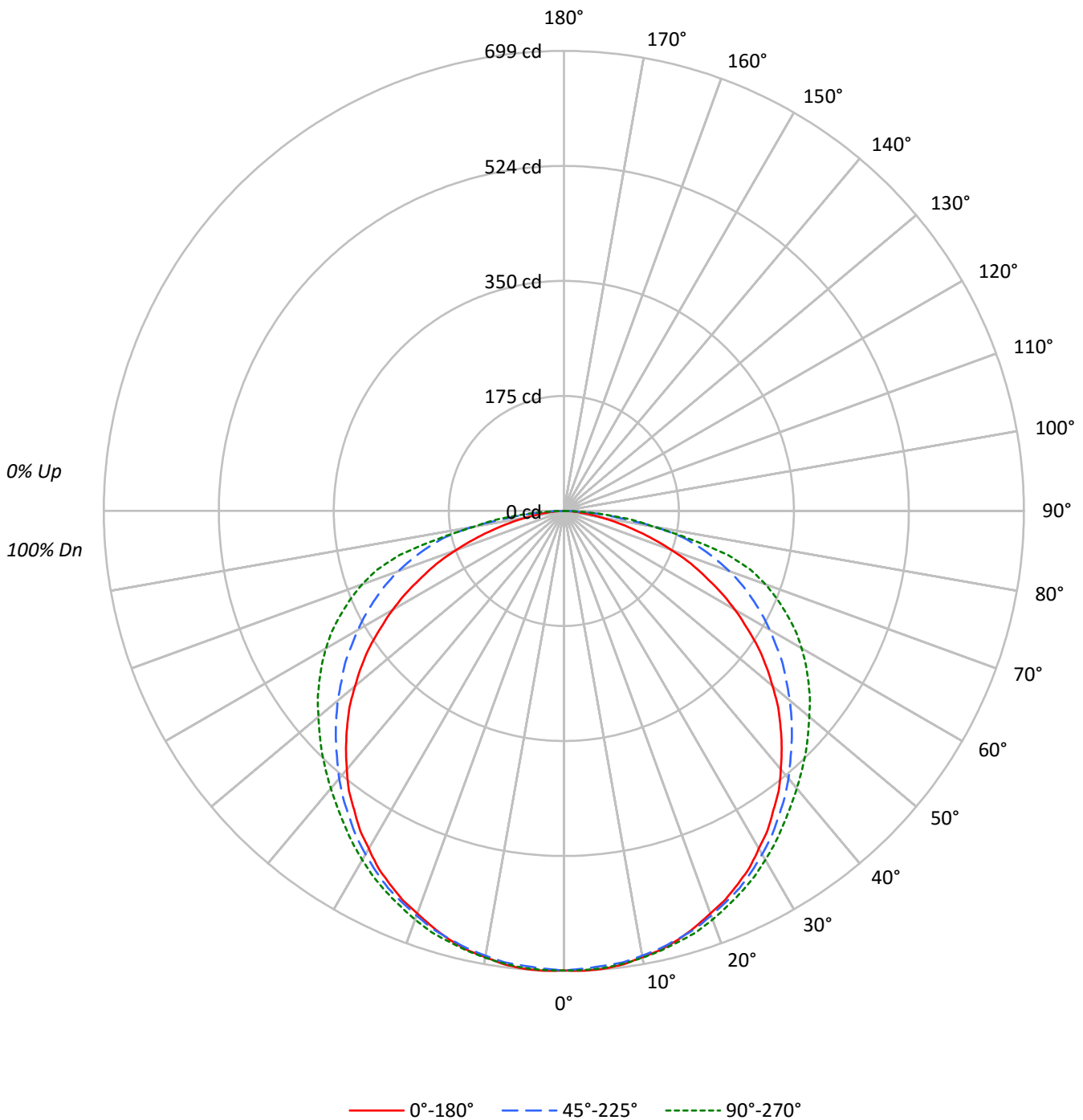
Input Watts (W): 26.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	939	939	939
5°	943	937	941
10°	940	937	942
15°	939	937	943
20°	932	937	946
25°	929	938	948
30°	920	936	951
35°	912	933	955
40°	901	932	967
45°	886	932	989
50°	867	938	1019
55°	845	953	1064
60°	809	972	1123
65°	757	1006	1192
70°	689	1053	1282
75°	584	1110	1340
80°	461	1118	1083
85°	340	851	953



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.2	3.0
10°-20°	190.6	8.6
20°-30°	291.5	13.1
30°-40°	356.3	16.0
40°-50°	379.7	17.1
50°-60°	363.1	16.4
60°-70°	307.6	13.9
70°-80°	206.7	9.3
80°-90°	58.3	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°	548.3	24.7
0°-40°	904.6	40.7
0°-60°	1647.4	74.2
0°-90°	2220.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2220.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	698	698	698	698	698	
5°	698	697	694	697	697	66
15°	674	674	673	678	677	190
25°	626	628	632	638	639	288
35°	555	559	568	579	581	348
45°	466	474	490	511	520	359
55°	360	373	406	438	454	321
65°	238	262	316	358	374	236
75°	112	153	214	250	258	120
85°	22	45	55	60	62	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	698.1	698.1	698.1	698.1	698.1
2.5°	699.2	699.2	695.9	698.1	698.1
5°	698.1	697.0	693.7	697.0	697.0
7.5°	694.8	693.7	691.5	694.8	693.7
10°	688.2	688.2	686.0	689.3	689.3
12.5°	682.7	681.6	680.5	684.9	683.8
15°	673.9	673.9	672.8	678.3	677.2
17.5°	662.9	664.0	665.1	669.5	670.6
20°	650.8	653.0	654.1	660.7	660.7
22.5°	639.8	640.9	643.1	649.7	649.7
25°	625.5	627.7	632.1	637.6	638.7
27.5°	611.1	612.2	617.7	625.5	626.6
30°	592.4	595.7	602.3	611.1	612.2
32.5°	575.9	579.2	586.9	595.7	597.9
35°	555.0	559.4	568.2	579.2	581.4
37.5°	536.3	539.6	550.6	562.7	566.0
40°	513.1	519.7	530.8	545.1	550.6
42.5°	490.0	496.6	509.8	528.6	535.2
45°	465.8	473.5	490.0	510.9	519.7
47.5°	441.6	450.4	469.1	493.3	503.2
50°	414.0	425.0	448.2	475.7	486.7
52.5°	387.6	400.8	426.1	457.0	471.3
55°	360.1	373.3	406.3	438.3	453.7
57.5°	329.2	346.9	383.2	419.5	436.1
60°	300.6	317.1	361.2	400.8	417.3
62.5°	269.8	291.8	339.2	381.0	397.5
65°	237.8	262.1	316.0	357.9	374.4
67.5°	209.2	235.6	292.9	334.7	351.3
70°	175.1	208.1	267.6	309.4	325.9
72.5°	143.1	179.5	241.2	281.9	297.3
75°	112.3	153.1	213.6	250.0	257.7
77.5°	83.7	126.6	185.0	200.4	194.9
80°	59.5	101.3	144.3	136.5	139.8
82.5°	38.5	77.1	89.2	101.3	104.6
85°	22.0	45.1	55.1	59.5	61.7
87.5°	9.9	16.5	22.0	22.0	20.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)