

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: P313472

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CA125-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: P313472
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC 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: 2264.0 lumens
Efficiency: N/A
Efficacy: 85.1 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

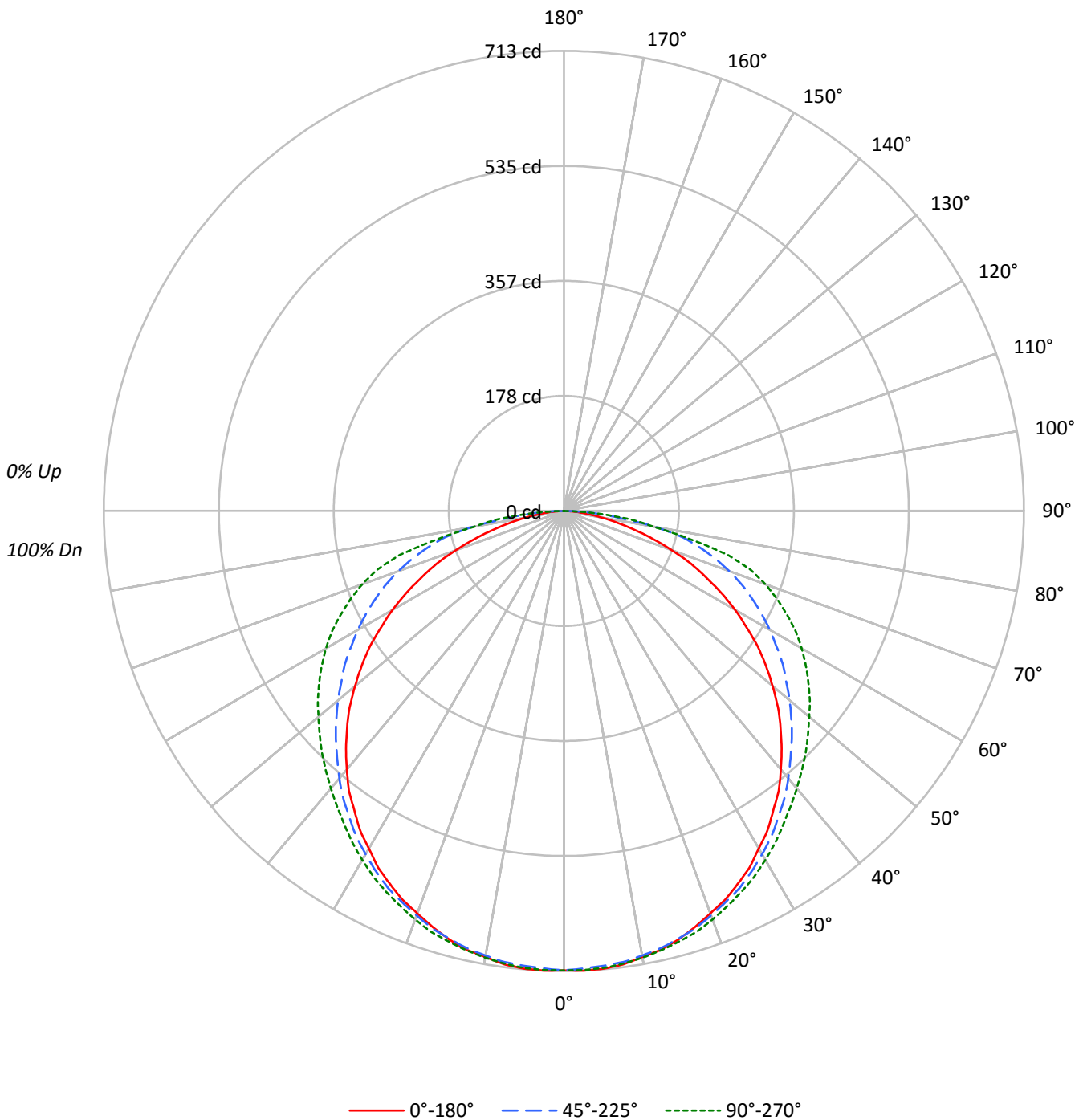
Input Watts (W): 26.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	958	958	958
5°	962	956	960
10°	959	956	960
15°	957	956	962
20°	950	955	965
25°	947	957	967
30°	939	954	970
35°	930	952	974
40°	919	951	986
45°	904	951	1008
50°	884	957	1039
55°	861	972	1085
60°	825	991	1145
65°	772	1026	1216
70°	703	1074	1308
75°	595	1133	1366
80°	470	1140	1105
85°	347	866	971



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.5	3.0
10°-20°	194.4	8.6
20°-30°	297.2	13.1
30°-40°	363.4	16.0
40°-50°	387.3	17.1
50°-60°	370.3	16.4
60°-70°	313.7	13.9
70°-80°	210.8	9.3
80°-90°	59.5	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°	559.1	24.7
0°-40°	922.5	40.7
0°-60°	1680.1	74.2
0°-90°	2264.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2264.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	712	712	712	712	712	
5°	712	711	708	711	711	68
15°	687	687	686	692	691	194
25°	638	640	645	650	651	294
35°	566	570	580	591	593	355
45°	475	483	500	521	530	366
55°	367	381	414	447	463	327
65°	243	267	322	365	382	241
75°	114	156	218	255	263	123
85°	22	46	56	61	63	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	712.0	712.0	712.0	712.0	712.0
2.5°	713.1	713.1	709.7	712.0	712.0
5°	712.0	710.8	707.5	710.8	710.8
7.5°	708.6	707.5	705.2	708.6	707.5
10°	701.9	701.9	699.6	703.0	703.0
12.5°	696.2	695.1	694.0	698.5	697.4
15°	687.3	687.3	686.1	691.7	690.6
17.5°	676.0	677.2	678.3	682.8	683.9
20°	663.7	665.9	667.0	673.8	673.8
22.5°	652.4	653.6	655.8	662.6	662.6
25°	637.8	640.1	644.6	650.2	651.3
27.5°	623.2	624.4	630.0	637.8	639.0
30°	604.2	607.5	614.3	623.2	624.4
32.5°	587.3	590.7	598.5	607.5	609.8
35°	566.0	570.5	579.5	590.7	592.9
37.5°	546.9	550.3	561.5	573.8	577.2
40°	523.3	530.0	541.3	555.9	561.5
42.5°	499.7	506.5	519.9	539.0	545.8
45°	475.0	482.9	499.7	521.1	530.0
47.5°	450.3	459.3	478.4	503.1	513.2
50°	422.2	433.5	457.0	485.1	496.4
52.5°	395.3	408.8	434.6	466.0	480.6
55°	367.2	380.7	414.4	446.9	462.7
57.5°	335.8	353.7	390.8	427.9	444.7
60°	306.6	323.4	368.3	408.8	425.6
62.5°	275.1	297.6	345.9	388.5	405.4
65°	242.6	267.3	322.3	365.0	381.8
67.5°	213.4	240.3	298.7	341.4	358.2
70°	178.6	212.2	272.9	315.6	332.4
72.5°	146.0	183.0	245.9	287.5	303.2
75°	114.5	156.1	217.9	254.9	262.8
77.5°	85.3	129.1	188.7	204.4	198.8
80°	60.6	103.3	147.1	139.2	142.6
82.5°	39.3	78.6	91.0	103.3	106.7
85°	22.5	46.0	56.1	60.6	62.9
87.5°	10.1	16.8	22.5	22.5	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)