

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: P313553

Luminaire Tested: **24FCZ2-40-UNV-L83050-RDP-CP125-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: P313553
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: 24FCZ2-40-UNV-L83050-RDP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (168) 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: 2578.0 lumens
Efficiency: N/A
Efficacy: 75.2 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

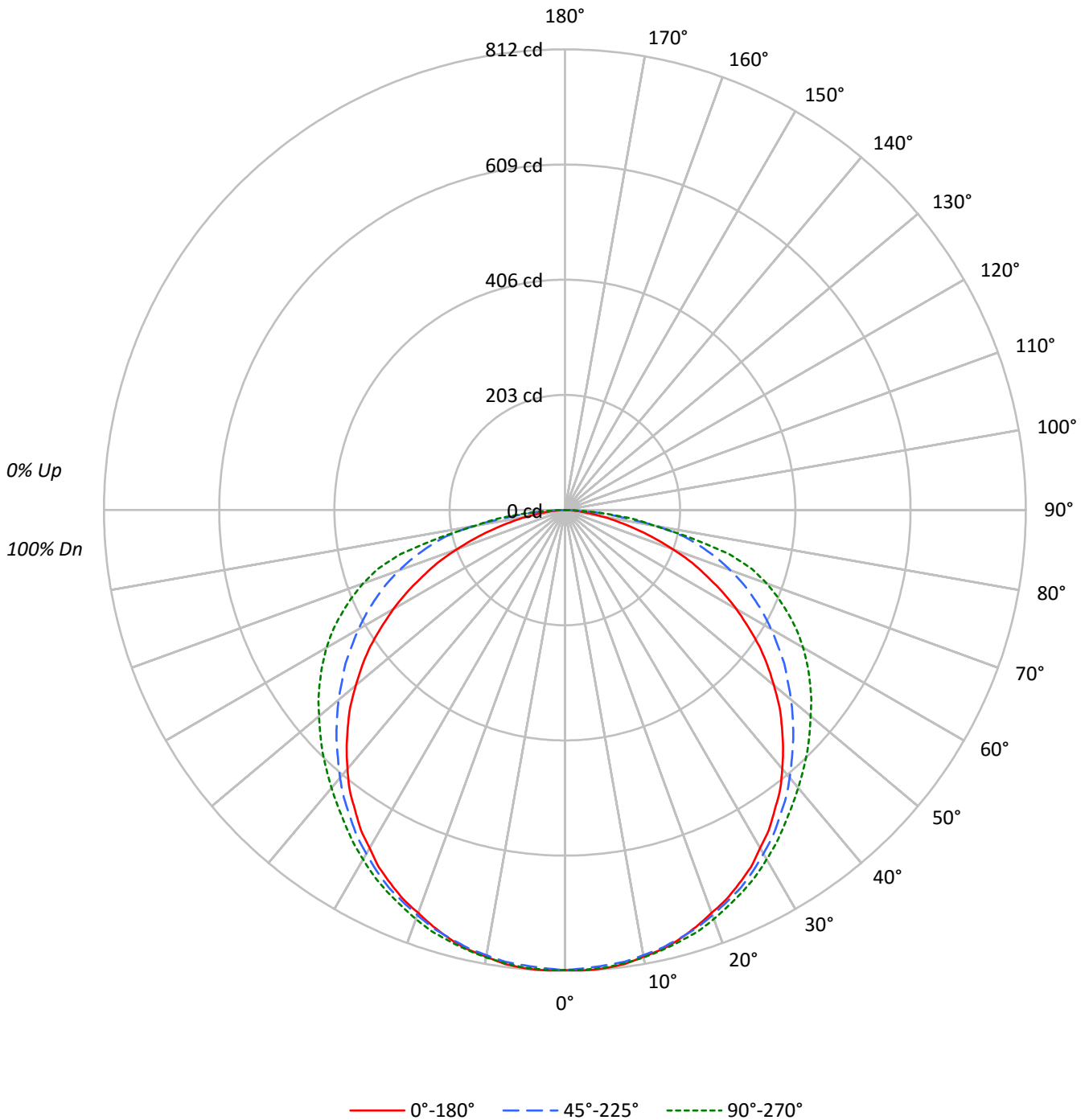
Input Watts (W): 34.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1091	1091	1091
5°	1095	1088	1093
10°	1092	1088	1094
15°	1090	1088	1095
20°	1082	1088	1099
25°	1078	1090	1101
30°	1069	1087	1105
35°	1059	1084	1109
40°	1047	1082	1123
45°	1029	1083	1149
50°	1006	1089	1183
55°	981	1107	1236
60°	939	1129	1304
65°	879	1168	1384
70°	800	1222	1489
75°	678	1290	1555
80°	535	1298	1258
85°	395	986	1105



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.9	3.0
10°-20°	221.3	8.6
20°-30°	338.5	13.1
30°-40°	413.8	16.0
40°-50°	441.0	17.1
50°-60°	421.6	16.4
60°-70°	357.2	13.9
70°-80°	240.0	9.3
80°-90°	67.7	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°	636.7	24.7
0°-40°	1050.5	40.7
0°-60°	1913.1	74.2
0°-90°	2578.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2578.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	811	811	811	811	811	
5°	811	809	806	809	809	77
15°	783	783	781	788	786	221
25°	726	729	734	740	742	335
35°	644	650	660	673	675	404
45°	541	550	569	593	604	417
55°	418	434	472	509	527	372
65°	276	304	367	416	435	274
75°	130	178	248	290	299	140
85°	26	52	64	69	72	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	810.7	810.7	810.7	810.7	810.7
2.5°	812.0	812.0	808.1	810.7	810.7
5°	810.7	809.4	805.6	809.4	809.4
7.5°	806.9	805.6	803.0	806.9	805.6
10°	799.2	799.2	796.6	800.5	800.5
12.5°	792.8	791.5	790.2	795.4	794.1
15°	782.6	782.6	781.3	787.7	786.4
17.5°	769.8	771.1	772.3	777.5	778.7
20°	755.7	758.3	759.6	767.2	767.2
22.5°	742.9	744.2	746.8	754.4	754.4
25°	726.3	728.9	734.0	740.4	741.7
27.5°	709.7	711.0	717.4	726.3	727.6
30°	688.0	691.8	699.5	709.7	711.0
32.5°	668.8	672.6	681.6	691.8	694.3
35°	644.5	649.6	659.8	672.6	675.2
37.5°	622.7	626.6	639.4	653.4	657.3
40°	595.9	603.6	616.3	633.0	639.4
42.5°	569.0	576.7	592.0	613.8	621.5
45°	540.9	549.8	569.0	593.3	603.6
47.5°	512.8	523.0	544.7	572.9	584.4
50°	480.8	493.6	520.4	552.4	565.2
52.5°	450.1	465.5	494.9	530.7	547.3
55°	418.1	433.5	471.8	508.9	526.8
57.5°	382.3	402.8	445.0	487.2	506.4
60°	349.1	368.3	419.4	465.5	484.6
62.5°	313.3	338.9	393.8	442.4	461.6
65°	276.2	304.3	367.0	415.6	434.8
67.5°	243.0	273.6	340.1	388.7	407.9
70°	203.3	241.7	310.7	359.3	378.5
72.5°	166.2	208.4	280.0	327.4	345.3
75°	130.4	177.7	248.1	290.3	299.2
77.5°	97.2	147.1	214.8	232.7	226.3
80°	69.1	117.6	167.5	158.6	162.4
82.5°	44.8	89.5	103.6	117.6	121.5
85°	25.6	52.4	63.9	69.1	71.6
87.5°	11.5	19.2	25.6	25.6	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)