

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: P309288

Luminaire Tested: **24FCZ2-35-UNV-L82765-HRP-CA125-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: P309288
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35-UNV-L82765-HRP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 2497.0 lumens
Efficiency: N/A
Efficacy: 87.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

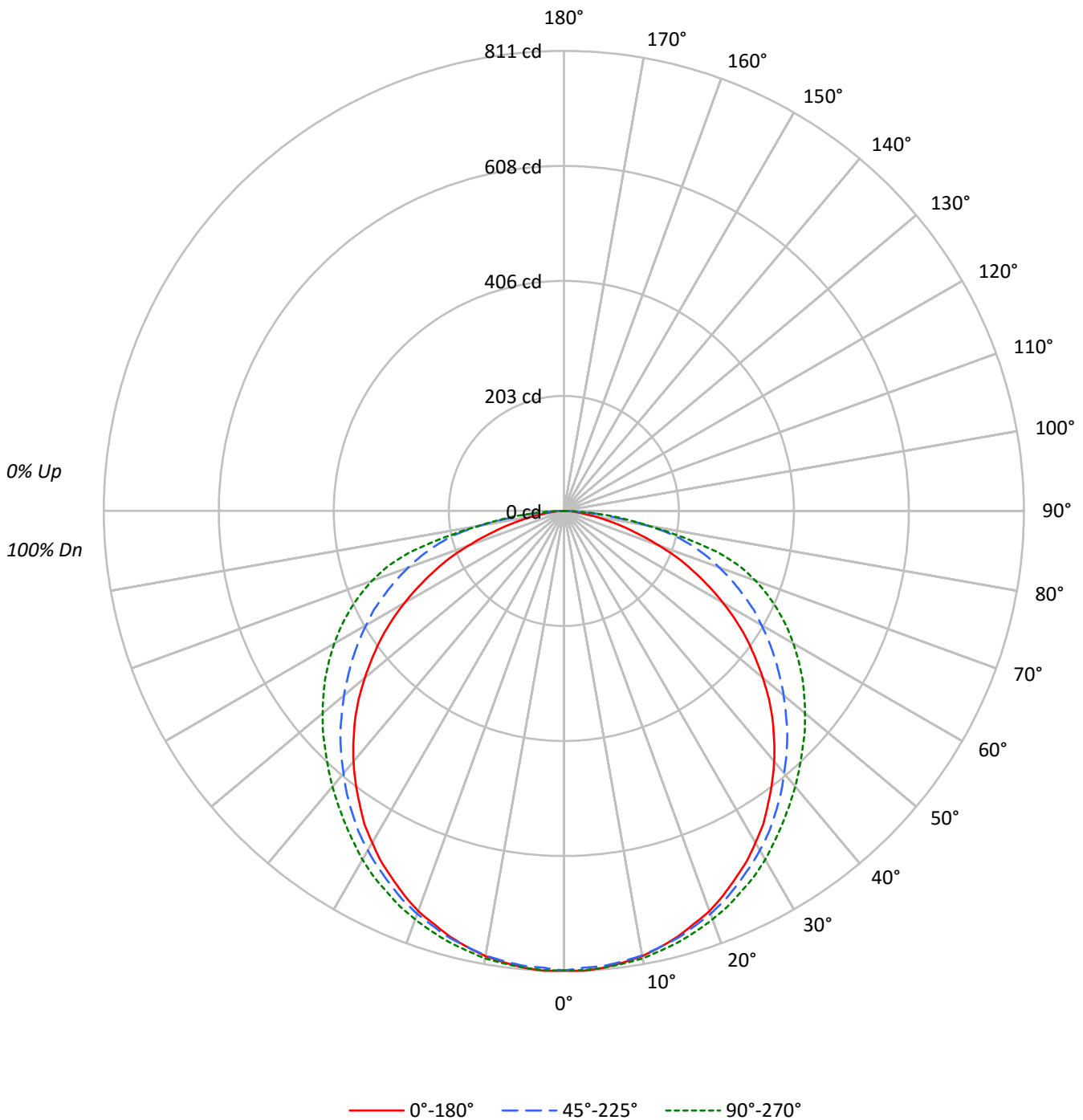
Input Watts (W): 28.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1090	1090	1090
5°	1091	1087	1091
10°	1088	1087	1094
15°	1082	1085	1095
20°	1075	1082	1097
25°	1061	1077	1099
30°	1049	1074	1103
35°	1032	1068	1104
40°	1013	1061	1114
45°	991	1060	1132
50°	958	1059	1162
55°	924	1067	1204
60°	872	1083	1257
65°	805	1108	1328
70°	703	1148	1415
75°	571	1207	1462
80°	422	1182	1182
85°	323	871	985



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	3.1
10°-20°	220.4	8.8
20°-30°	335.5	13.4
30°-40°	407.4	16.3
40°-50°	430.4	17.2
50°-60°	406.1	16.3
60°-70°	337.7	13.5
70°-80°	222.2	8.9
80°-90°	60.6	2.4
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°	632.6	25.3
0°-40°	1040.0	41.7
0°-60°	1876.6	75.2
0°-90°	2497.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2497.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	810	810	810	810	810	
5°	808	808	805	808	808	77
15°	777	778	779	786	786	219
25°	715	719	726	738	740	330
35°	628	636	650	667	672	393
45°	521	531	557	584	595	401
55°	394	411	455	498	513	351
65°	253	282	348	399	417	250
75°	110	160	232	275	281	118
85°	21	46	56	63	64	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	810.2	810.2	810.2	810.2	810.2
2.5°	811.2	810.2	806.0	810.2	810.2
5°	808.1	808.1	804.9	808.1	808.1
7.5°	802.8	802.8	800.7	804.9	804.9
10°	796.6	796.6	795.5	800.7	800.7
12.5°	787.2	788.2	787.2	793.4	793.4
15°	776.7	777.7	778.8	786.1	786.1
17.5°	763.1	765.2	767.3	775.7	776.7
20°	750.6	751.6	755.8	765.2	766.2
22.5°	733.8	737.0	742.2	751.6	754.7
25°	715.0	719.2	725.5	738.0	740.1
27.5°	697.3	700.4	708.8	722.3	726.5
30°	675.3	680.5	691.0	704.6	709.8
32.5°	654.4	659.6	672.2	686.8	691.0
35°	628.3	635.6	650.2	666.9	672.2
37.5°	603.2	610.5	628.3	647.1	653.3
40°	577.0	585.4	604.2	626.2	634.5
42.5°	548.8	560.3	581.2	605.3	614.7
45°	520.6	531.0	557.2	584.4	594.8
47.5°	490.3	502.8	531.0	563.4	576.0
50°	457.9	473.5	506.0	541.5	555.1
52.5°	425.5	443.2	479.8	519.5	534.2
55°	394.1	410.8	454.7	497.6	513.3
57.5°	359.6	380.5	428.6	474.6	490.3
60°	324.1	347.1	402.5	450.5	467.3
62.5°	288.5	314.7	377.4	425.5	443.2
65°	253.0	282.2	348.1	399.3	417.1
67.5°	218.5	250.9	320.9	372.1	389.9
70°	178.8	219.5	291.7	341.8	359.6
72.5°	142.2	189.2	263.4	310.5	326.2
75°	109.8	159.9	232.1	274.9	281.2
77.5°	80.5	130.7	199.7	214.3	215.3
80°	54.4	104.5	152.6	150.5	152.6
82.5°	35.5	78.4	96.2	107.7	108.7
85°	20.9	46.0	56.4	62.7	63.8
87.5°	10.5	15.7	19.9	20.9	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)