

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: P313101

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-HRP-CP125-W2A-U-3500K**

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: P313101
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: 24FCZ2-35HE-UNV-L83050-HRP-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3500K 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: 2442.0 lumens
Efficiency: N/A
Efficacy: 93.9 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

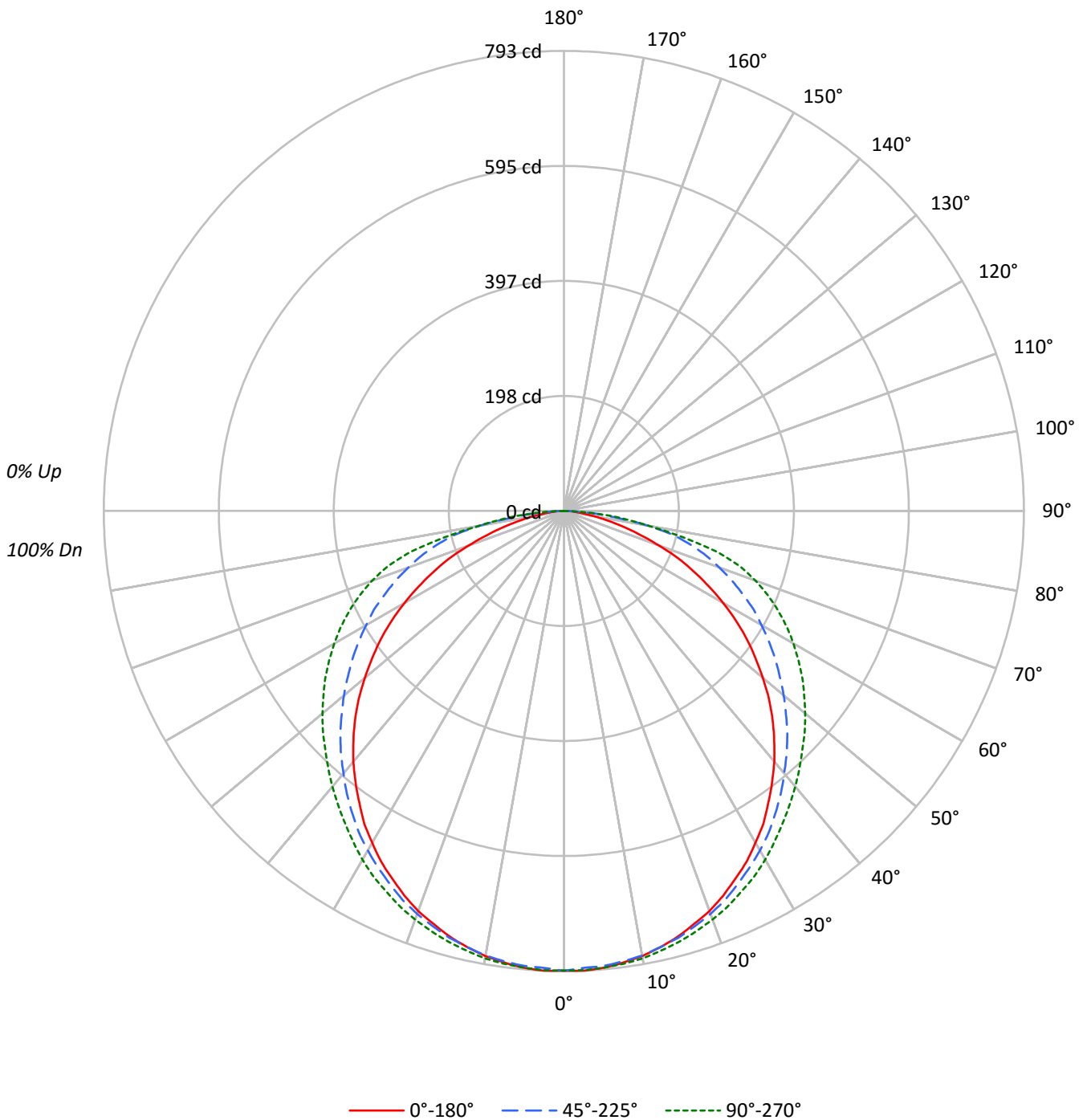
Input Watts (W): 26
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1066	1066	1066
5°	1067	1063	1067
10°	1064	1063	1070
15°	1058	1061	1071
20°	1051	1058	1073
25°	1038	1053	1075
30°	1026	1050	1079
35°	1009	1044	1080
40°	991	1038	1090
45°	969	1037	1107
50°	937	1036	1136
55°	904	1043	1178
60°	853	1059	1230
65°	788	1084	1299
70°	688	1122	1384
75°	558	1180	1430
80°	412	1157	1157
85°	315	852	963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.1	3.1
10°-20°	215.5	8.8
20°-30°	328.1	13.4
30°-40°	398.4	16.3
40°-50°	420.9	17.2
50°-60°	397.2	16.3
60°-70°	330.3	13.5
70°-80°	217.3	8.9
80°-90°	59.2	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°	618.7	25.3
0°-40°	1017.1	41.7
0°-60°	1835.3	75.2
0°-90°	2442.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2442.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	792	792	792	792	792	
5°	790	790	787	790	790	75
15°	760	761	762	769	769	214
25°	699	703	710	722	724	323
35°	614	622	636	652	657	385
45°	509	519	545	572	582	392
55°	385	402	445	487	502	343
65°	247	276	340	390	408	245
75°	107	156	227	269	275	116
85°	20	45	55	61	62	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	792.3	792.3	792.3	792.3	792.3
2.5°	793.3	792.3	788.2	792.3	792.3
5°	790.3	790.3	787.2	790.3	790.3
7.5°	785.2	785.2	783.1	787.2	787.2
10°	779.0	779.0	778.0	783.1	783.1
12.5°	769.8	770.8	769.8	776.0	776.0
15°	759.6	760.6	761.6	768.8	768.8
17.5°	746.3	748.3	750.4	758.6	759.6
20°	734.0	735.1	739.1	748.3	749.4
22.5°	717.7	720.7	725.9	735.1	738.1
25°	699.3	703.4	709.5	721.8	723.8
27.5°	681.9	685.0	693.1	706.4	710.5
30°	660.4	665.5	675.8	689.1	694.2
32.5°	640.0	645.1	657.4	671.7	675.8
35°	614.4	621.6	635.9	652.2	657.4
37.5°	589.9	597.0	614.4	632.8	639.0
40°	564.3	572.5	590.9	612.4	620.6
42.5°	536.7	548.0	568.4	591.9	601.1
45°	509.1	519.3	544.9	571.5	581.7
47.5°	479.5	491.7	519.3	551.0	563.3
50°	447.8	463.1	494.8	529.6	542.9
52.5°	416.1	433.5	469.3	508.1	522.4
55°	385.4	401.8	444.7	486.6	502.0
57.5°	351.7	372.1	419.2	464.1	479.5
60°	316.9	339.4	393.6	440.6	457.0
62.5°	282.2	307.7	369.1	416.1	433.5
65°	247.4	276.0	340.4	390.5	407.9
67.5°	213.7	245.4	313.9	364.0	381.3
70°	174.8	214.7	285.2	334.3	351.7
72.5°	139.0	185.0	257.6	303.6	319.0
75°	107.3	156.4	227.0	268.9	275.0
77.5°	78.7	127.8	195.3	209.6	210.6
80°	53.2	102.2	149.3	147.2	149.3
82.5°	34.8	76.7	94.1	105.3	106.3
85°	20.4	45.0	55.2	61.3	62.4
87.5°	10.2	15.3	19.4	20.4	22.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)