

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: P310590

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CA125-W2A-U-3000K**

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: P310590
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-L82765-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 3000K 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: 3026.0 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

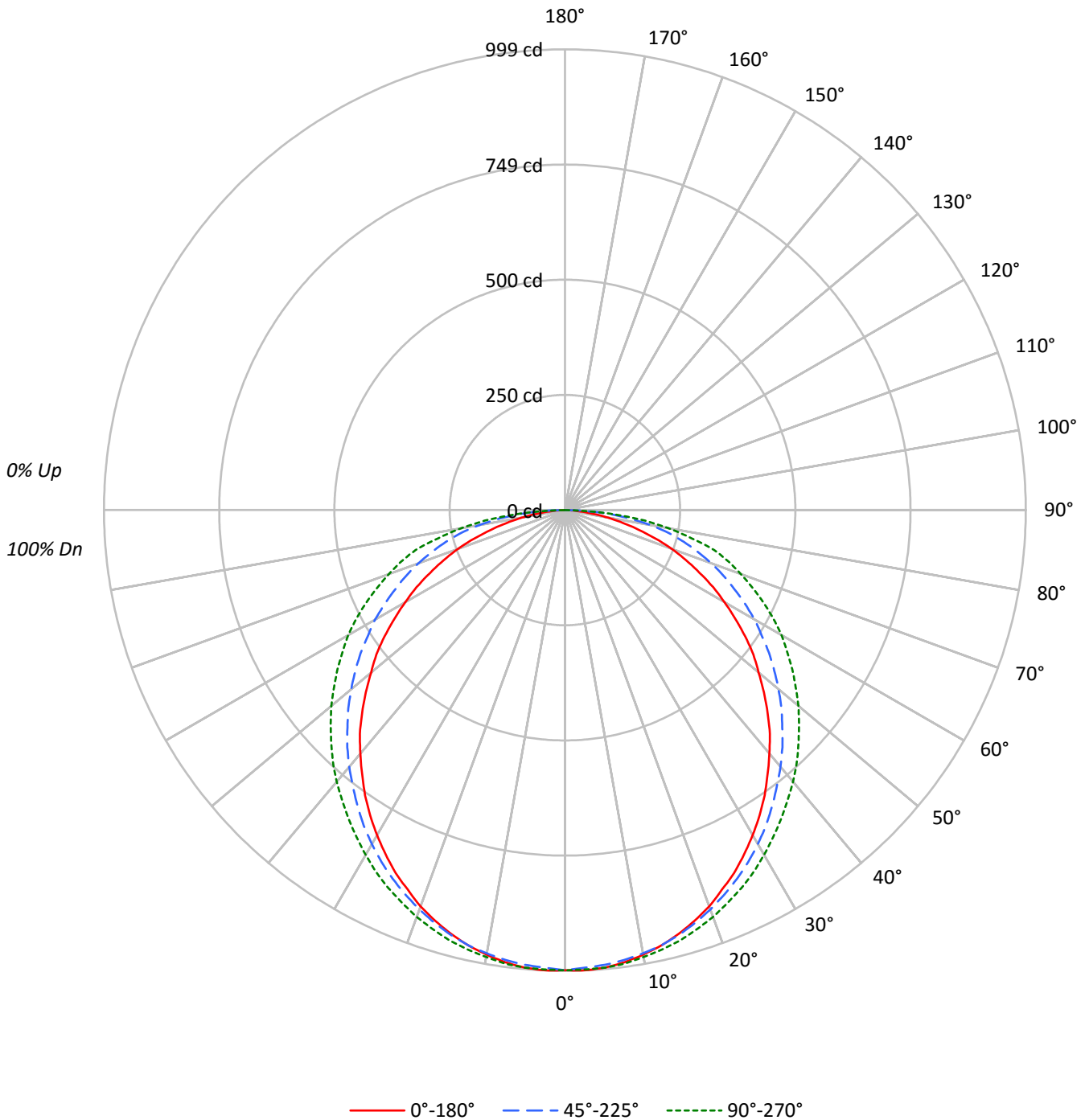
Input Watts (W): 25.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1343	1343	1343
5°	1345	1337	1345
10°	1337	1333	1344
15°	1326	1329	1345
20°	1310	1320	1344
25°	1289	1310	1343
30°	1265	1299	1341
35°	1240	1286	1342
40°	1211	1277	1351
45°	1183	1268	1362
50°	1147	1265	1383
55°	1119	1267	1411
60°	1075	1278	1459
65°	1026	1291	1512
70°	972	1331	1596
75°	867	1389	1743
80°	739	1471	1781
85°	526	1457	1704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.4	3.1
10°-20°	270.1	8.9
20°-30°	407.9	13.5
30°-40°	491.6	16.2
40°-50°	516.1	17.1
50°-60°	482.8	16.0
60°-70°	398.7	13.2
70°-80°	271.7	9.0
80°-90°	92.7	3.1
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°	772.4	25.5
0°-40°	1264.0	41.8
0°-60°	2262.9	74.8
0°-90°	3026.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3026.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	998	998	998	998	998	
5°	996	995	990	996	996	95
15°	952	953	954	964	966	268
25°	868	872	882	900	905	400
35°	755	763	783	809	817	472
45°	622	634	667	703	716	479
55°	477	496	540	584	601	426
65°	322	349	406	457	475	320
75°	167	205	267	317	335	178
85°	34	67	94	106	110	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	997.9	997.9	997.9	997.9	997.9
2.5°	999.0	997.9	992.9	997.9	996.9
5°	995.9	994.9	989.9	995.9	995.9
7.5°	988.9	988.9	983.9	990.9	991.9
10°	978.9	978.9	975.9	983.9	983.9
12.5°	966.8	966.8	966.8	974.9	975.9
15°	951.8	952.8	953.8	963.8	965.8
17.5°	933.7	935.7	938.7	950.8	952.8
20°	914.6	916.6	921.6	935.7	938.7
22.5°	890.5	895.5	902.6	918.6	921.6
25°	868.4	872.5	882.5	899.6	904.6
27.5°	841.3	847.4	860.4	878.5	885.5
30°	814.2	820.2	836.3	857.4	863.4
32.5°	785.1	794.1	811.2	833.3	840.3
35°	755.0	763.0	783.1	809.2	817.2
37.5°	721.9	732.9	755.0	783.1	793.1
40°	689.7	701.8	726.9	757.0	769.0
42.5°	657.6	669.6	697.8	731.9	743.9
45°	621.5	634.5	666.6	702.8	715.8
47.5°	585.3	601.4	636.5	674.7	688.7
50°	548.2	566.2	604.4	644.6	660.6
52.5°	515.0	532.1	572.3	615.4	630.5
55°	476.9	496.0	540.1	584.3	601.4
57.5°	437.7	458.8	506.0	554.2	571.3
60°	399.6	422.7	474.9	523.1	542.1
62.5°	362.4	385.5	439.7	489.9	509.0
65°	322.3	349.4	405.6	456.8	474.9
67.5°	284.1	313.2	372.5	422.7	440.7
70°	247.0	275.1	338.3	387.5	405.6
72.5°	206.8	238.9	302.2	353.4	372.5
75°	166.7	204.8	267.1	317.3	335.3
77.5°	129.5	168.7	230.9	272.1	281.1
80°	95.4	135.5	189.8	218.9	229.9
82.5°	61.2	101.4	144.6	165.7	174.7
85°	34.1	67.3	94.4	106.4	110.4
87.5°	14.1	29.1	38.2	43.2	43.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)