

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: P309133

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CP250-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: P309133
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-44HE-UNV-L82765-S-CP250-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 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: 3804.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

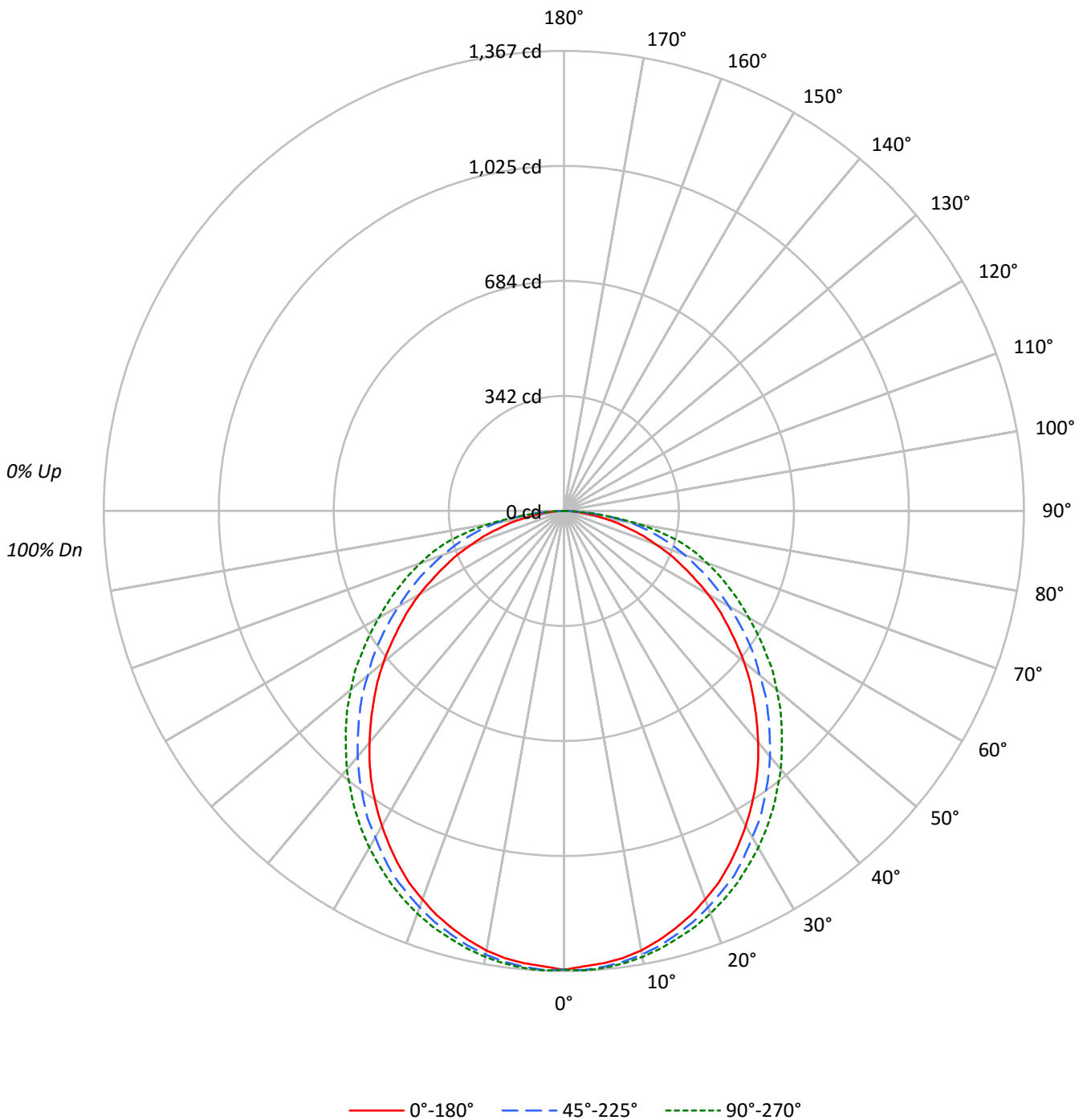
Input Watts (W): 37.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3668	3668	3668
5°	3644	3672	3682
10°	3623	3657	3676
15°	3575	3624	3659
20°	3517	3588	3644
25°	3447	3552	3620
30°	3359	3480	3590
35°	3265	3417	3557
40°	3155	3348	3523
45°	3040	3269	3485
50°	2928	3180	3455
55°	2790	3123	3430
60°	2665	3047	3420
65°	2486	3029	3458
70°	2290	3002	3561
75°	2067	3045	3746
80°	1788	3135	3521
85°	1479	2631	2631



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.9	3.4
10°-20°	366.8	9.6
20°-30°	548.9	14.4
30°-40°	650.0	17.1
40°-50°	662.5	17.4
50°-60°	593.7	15.6
60°-70°	464.9	12.2
70°-80°	299.8	7.9
80°-90°	88.6	2.3
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°	1044.6	27.5
0°-40°	1694.7	44.5
0°-60°	2950.9	77.6
0°-90°	3804.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3804.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1363	1363	1363	1363	1363	
5°	1349	1352	1360	1361	1363	128
15°	1283	1290	1301	1312	1313	362
25°	1161	1171	1196	1212	1219	534
35°	994	1006	1040	1072	1083	621
45°	799	816	859	903	916	617
55°	595	614	666	712	731	533
65°	390	414	476	522	543	388
75°	199	229	293	342	360	213
85°	48	66	85	85	85	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1363.1	1363.1	1363.1	1363.1	1363.1
2.5°	1354.2	1357.8	1364.9	1366.6	1366.6
5°	1348.9	1352.4	1359.5	1361.3	1363.1
7.5°	1340.0	1341.8	1350.7	1354.2	1356.0
10°	1325.8	1329.4	1338.2	1343.6	1345.3
12.5°	1306.3	1311.6	1322.3	1329.4	1331.1
15°	1283.2	1290.3	1301.0	1311.6	1313.4
17.5°	1258.4	1265.5	1279.7	1292.1	1295.6
20°	1228.2	1237.1	1253.1	1267.2	1272.6
22.5°	1198.0	1205.1	1224.7	1242.4	1247.7
25°	1160.8	1171.4	1196.3	1212.2	1219.3
27.5°	1121.7	1134.1	1159.0	1180.3	1187.4
30°	1080.9	1093.3	1119.9	1146.6	1155.4
32.5°	1038.3	1052.5	1084.4	1111.1	1119.9
35°	993.9	1006.3	1040.1	1072.0	1082.7
37.5°	947.8	958.4	997.5	1031.2	1041.8
40°	898.1	912.3	953.1	992.1	1002.8
42.5°	848.4	864.4	905.2	947.8	958.4
45°	798.7	816.4	859.0	903.4	915.8
47.5°	750.8	765.0	812.9	855.5	873.2
50°	699.3	713.5	759.6	807.6	825.3
52.5°	646.0	665.6	715.3	761.4	782.7
55°	594.6	614.1	665.6	711.7	731.2
57.5°	546.7	562.6	615.9	663.8	683.3
60°	495.2	509.4	566.2	617.7	635.4
62.5°	440.2	461.5	520.0	568.0	589.3
65°	390.5	413.5	475.7	521.8	543.1
67.5°	344.3	365.6	426.0	475.7	498.7
70°	291.1	319.5	381.6	431.3	452.6
72.5°	248.5	273.3	337.2	386.9	410.0
75°	198.8	229.0	292.9	342.5	360.3
77.5°	158.0	188.1	248.5	287.5	296.4
80°	115.4	145.5	202.3	221.9	227.2
82.5°	78.1	106.5	145.5	150.9	152.6
85°	47.9	65.7	85.2	85.2	85.2
87.5°	23.1	26.6	30.2	28.4	28.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)