

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: P309139

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CP250-W2A-U-6500K**

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: P309139
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-6500K
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: 4071.0 lumens
Efficiency: N/A
Efficacy: 104.7 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

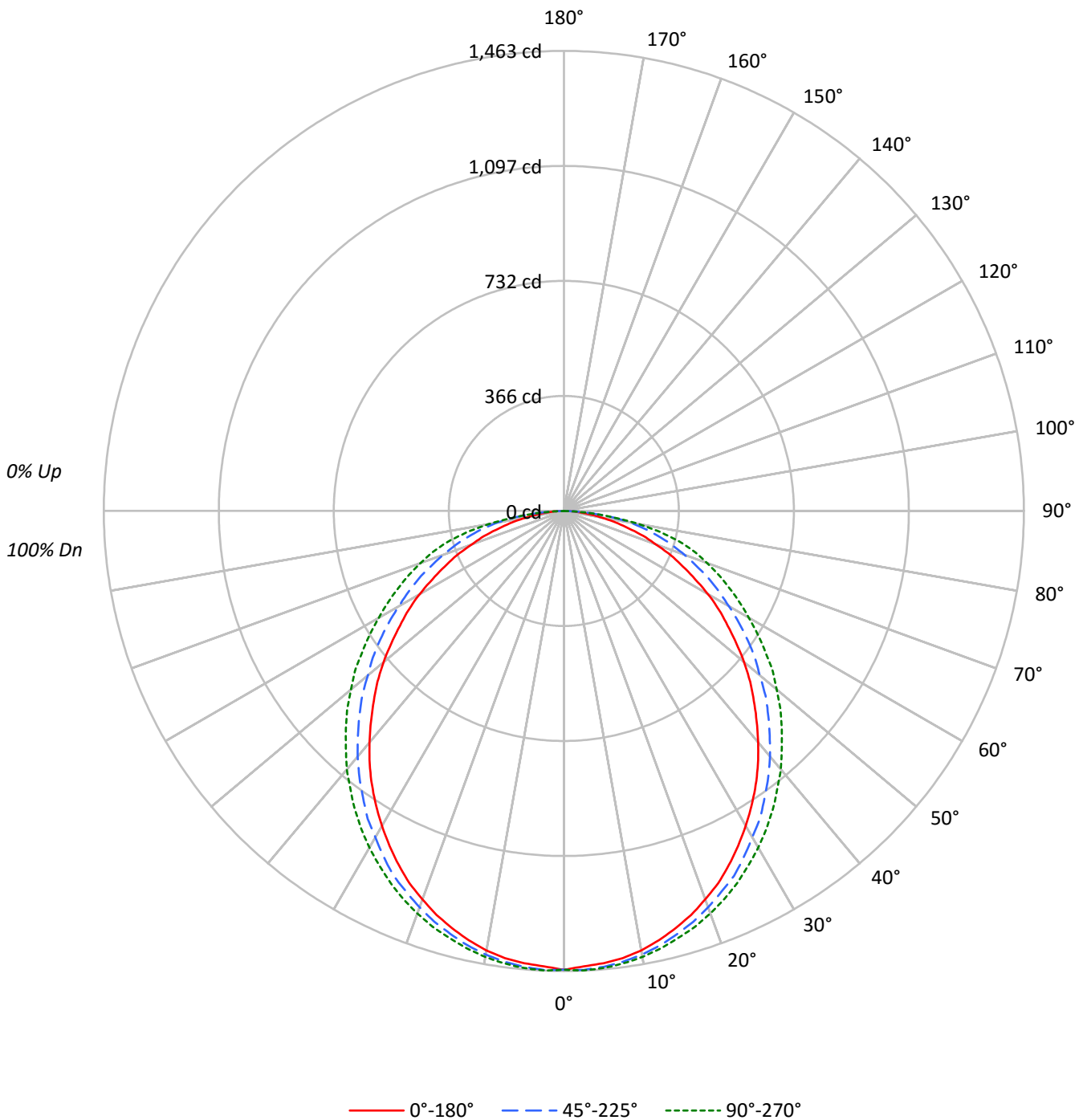
Input Watts (W): 38.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3926	3926	3926
5°	3900	3930	3941
10°	3877	3913	3934
15°	3826	3879	3916
20°	3764	3840	3900
25°	3688	3801	3874
30°	3594	3724	3842
35°	3494	3657	3806
40°	3376	3583	3770
45°	3253	3499	3730
50°	3133	3404	3697
55°	2985	3342	3672
60°	2852	3261	3660
65°	2661	3241	3701
70°	2451	3213	3811
75°	2211	3258	4009
80°	1914	3355	3767
85°	1584	2816	2816



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.0	3.4
10°-20°	392.6	9.6
20°-30°	587.4	14.4
30°-40°	695.7	17.1
40°-50°	708.9	17.4
50°-60°	635.4	15.6
60°-70°	497.5	12.2
70°-80°	320.8	7.9
80°-90°	94.8	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°	1118.0	27.5
0°-40°	1813.6	44.5
0°-60°	3158.0	77.6
0°-90°	4071.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4071.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1459	1459	1459	1459	1459	
5°	1444	1447	1455	1457	1459	137
15°	1373	1381	1392	1404	1406	387
25°	1242	1254	1280	1297	1305	572
35°	1064	1077	1113	1147	1159	665
45°	855	874	919	967	980	660
55°	636	657	712	762	783	571
65°	418	443	509	558	581	415
75°	213	245	313	367	386	228
85°	51	70	91	91	91	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1458.8	1458.8	1458.8	1458.8	1458.8
2.5°	1449.3	1453.1	1460.7	1462.6	1462.6
5°	1443.6	1447.4	1455.0	1456.9	1458.8
7.5°	1434.1	1436.0	1445.5	1449.3	1451.2
10°	1418.9	1422.7	1432.2	1437.9	1439.8
12.5°	1398.0	1403.7	1415.1	1422.7	1424.6
15°	1373.3	1380.9	1392.3	1403.7	1405.6
17.5°	1346.7	1354.3	1369.5	1382.8	1386.6
20°	1314.4	1323.9	1341.0	1356.2	1361.9
22.5°	1282.1	1289.7	1310.6	1329.6	1335.3
25°	1242.2	1253.6	1280.2	1297.3	1304.9
27.5°	1200.4	1213.7	1240.3	1263.1	1270.7
30°	1156.8	1170.1	1198.5	1227.0	1236.5
32.5°	1111.2	1126.4	1160.6	1189.0	1198.5
35°	1063.7	1077.0	1113.1	1147.3	1158.7
37.5°	1014.3	1025.7	1067.5	1103.6	1115.0
40°	961.1	976.3	1020.0	1061.8	1073.2
42.5°	907.9	925.0	968.7	1014.3	1025.7
45°	854.7	873.7	919.3	966.8	980.1
47.5°	803.5	818.7	869.9	915.5	934.5
50°	748.4	763.6	813.0	864.2	883.2
52.5°	691.4	712.3	765.5	814.9	837.7
55°	636.3	657.2	712.3	761.7	782.6
57.5°	585.0	602.1	659.1	710.4	731.3
60°	529.9	545.1	605.9	661.0	680.0
62.5°	471.1	493.9	556.5	607.8	630.6
65°	417.9	442.6	509.0	558.4	581.2
67.5°	368.5	391.3	455.9	509.0	533.7
70°	311.5	341.9	408.4	461.6	484.4
72.5°	265.9	292.5	360.9	414.1	438.8
75°	212.7	245.0	313.4	366.6	385.6
77.5°	169.0	201.3	265.9	307.7	317.2
80°	123.5	155.8	216.5	237.4	243.1
82.5°	83.6	114.0	155.8	161.5	163.4
85°	51.3	70.3	91.2	91.2	91.2
87.5°	24.7	28.5	32.3	30.4	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)