

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: P309116

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CP125-W2A-U-4000K**

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: P309116
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-CP125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 4093.0 lumens
Efficiency: N/A
Efficacy: 108.9 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

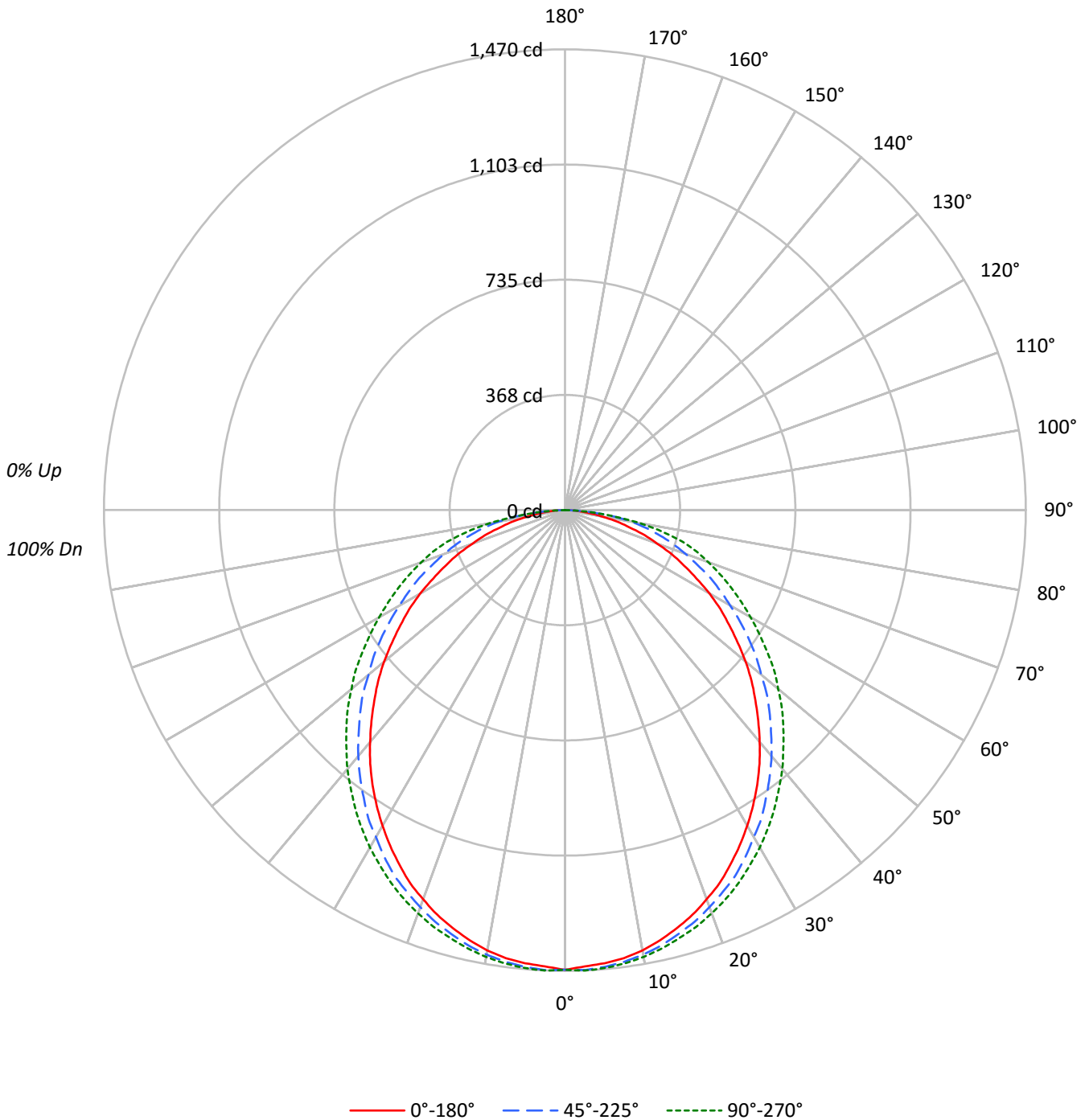
Input Watts (W): 37.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3947	3947	3947
5°	3921	3951	3962
10°	3898	3935	3956
15°	3847	3900	3937
20°	3784	3861	3921
25°	3708	3822	3896
30°	3614	3744	3863
35°	3513	3676	3827
40°	3394	3602	3790
45°	3271	3518	3750
50°	3150	3422	3718
55°	3001	3360	3691
60°	2868	3279	3680
65°	2675	3259	3721
70°	2464	3231	3832
75°	2224	3276	4031
80°	1923	3374	3787
85°	1593	2831	2831



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.7	3.4
10°-20°	394.7	9.6
20°-30°	590.6	14.4
30°-40°	699.4	17.1
40°-50°	712.8	17.4
50°-60°	638.9	15.6
60°-70°	500.2	12.2
70°-80°	322.5	7.9
80°-90°	95.3	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°	1124.0	27.5
0°-40°	1823.4	44.5
0°-60°	3175.0	77.6
0°-90°	4093.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4093.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1467	1467	1467	1467	1467	
5°	1451	1455	1463	1465	1467	138
15°	1381	1388	1400	1411	1413	389
25°	1249	1260	1287	1304	1312	575
35°	1069	1083	1119	1154	1165	668
45°	859	878	924	972	985	664
55°	640	661	716	766	787	574
65°	420	445	512	562	584	417
75°	214	246	315	369	388	229
85°	52	71	92	92	92	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1466.6	1466.6	1466.6	1466.6	1466.6
2.5°	1457.1	1460.9	1468.6	1470.5	1470.5
5°	1451.4	1455.2	1462.8	1464.7	1466.6
7.5°	1441.8	1443.7	1453.3	1457.1	1459.0
10°	1426.5	1430.4	1439.9	1445.6	1447.6
12.5°	1405.5	1411.3	1422.7	1430.4	1432.3
15°	1380.7	1388.4	1399.8	1411.3	1413.2
17.5°	1354.0	1361.6	1376.9	1390.3	1394.1
20°	1321.5	1331.1	1348.2	1363.5	1369.3
22.5°	1289.0	1296.7	1317.7	1336.8	1342.5
25°	1248.9	1260.4	1287.1	1304.3	1312.0
27.5°	1206.9	1220.3	1247.0	1270.0	1277.6
30°	1163.0	1176.4	1205.0	1233.7	1243.2
32.5°	1117.2	1132.5	1166.8	1195.5	1205.0
35°	1069.4	1082.8	1119.1	1153.5	1164.9
37.5°	1019.8	1031.2	1073.3	1109.5	1121.0
40°	966.3	981.6	1025.5	1067.5	1079.0
42.5°	912.8	930.0	973.9	1019.8	1031.2
45°	859.4	878.5	924.3	972.0	985.4
47.5°	807.8	823.1	874.6	920.5	939.6
50°	752.4	767.7	817.4	868.9	888.0
52.5°	695.1	716.1	769.6	819.3	842.2
55°	639.7	660.8	716.1	765.8	786.8
57.5°	588.2	605.4	662.7	714.2	735.2
60°	532.8	548.1	609.2	664.6	683.7
62.5°	473.6	496.5	559.5	611.1	634.0
65°	420.1	445.0	511.8	561.5	584.4
67.5°	370.5	393.4	458.3	511.8	536.6
70°	313.2	343.7	410.6	464.1	487.0
72.5°	267.4	294.1	362.8	416.3	441.1
75°	213.9	246.4	315.1	368.6	387.7
77.5°	170.0	202.4	267.4	309.4	318.9
80°	124.1	156.6	217.7	238.7	244.4
82.5°	84.0	114.6	156.6	162.3	164.2
85°	51.6	70.7	91.7	91.7	91.7
87.5°	24.8	28.6	32.5	30.6	30.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)