

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: P312998

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-CA125-W2A-U-4500K**

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: P312998
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: 22FCZ2-39HE-UNV-L83050-S-CA125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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: 3951.0 lumens
Efficiency: N/A
Efficacy: 116.2 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

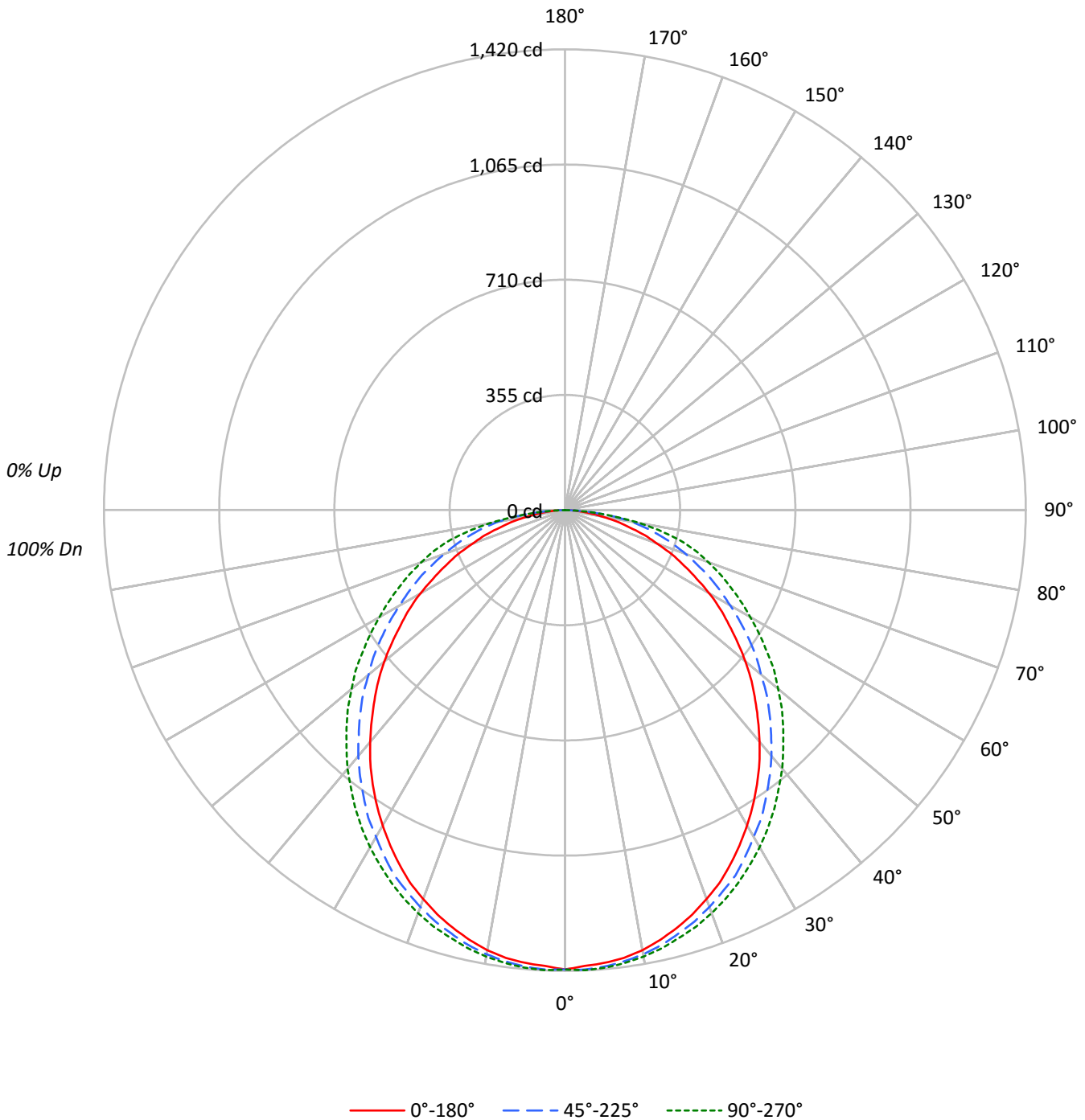
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3810	3810	3810
5°	3784	3814	3824
10°	3763	3798	3818
15°	3713	3764	3800
20°	3653	3727	3785
25°	3580	3689	3760
30°	3489	3614	3729
35°	3391	3549	3694
40°	3277	3477	3659
45°	3157	3395	3620
50°	3041	3303	3589
55°	2898	3243	3563
60°	2768	3165	3552
65°	2583	3145	3592
70°	2378	3118	3699
75°	2147	3163	3891
80°	1857	3257	3657
85°	1538	2732	2732



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.9	3.4
10°-20°	381.0	9.6
20°-30°	570.1	14.4
30°-40°	675.1	17.1
40°-50°	688.1	17.4
50°-60°	616.7	15.6
60°-70°	482.8	12.2
70°-80°	311.3	7.9
80°-90°	92.0	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°	1085.0	27.5
0°-40°	1760.1	44.5
0°-60°	3064.9	77.6
0°-90°	3951.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3951.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1416	1416	1416	1416	1416	
5°	1401	1405	1412	1414	1416	133
15°	1333	1340	1351	1362	1364	376
25°	1206	1217	1242	1259	1266	555
35°	1032	1045	1080	1113	1124	645
45°	830	848	892	938	951	641
55°	618	638	691	739	760	554
65°	406	430	494	542	564	403
75°	206	238	304	356	374	221
85°	50	68	88	88	88	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1415.8	1415.8	1415.8	1415.8	1415.8
2.5°	1406.5	1410.2	1417.6	1419.5	1419.5
5°	1401.0	1404.7	1412.1	1413.9	1415.8
7.5°	1391.8	1393.6	1402.9	1406.5	1408.4
10°	1377.1	1380.7	1390.0	1395.5	1397.3
12.5°	1356.8	1362.3	1373.4	1380.7	1382.6
15°	1332.8	1340.2	1351.2	1362.3	1364.1
17.5°	1307.0	1314.4	1329.1	1342.0	1345.7
20°	1275.7	1284.9	1301.5	1316.2	1321.8
22.5°	1244.3	1251.7	1272.0	1290.4	1295.9
25°	1205.6	1216.7	1242.5	1259.1	1266.4
27.5°	1165.1	1178.0	1203.8	1225.9	1233.3
30°	1122.7	1135.6	1163.2	1190.9	1200.1
32.5°	1078.4	1093.2	1126.3	1154.0	1163.2
35°	1032.3	1045.2	1080.3	1113.4	1124.5
37.5°	984.4	995.5	1036.0	1071.0	1082.1
40°	932.8	947.5	989.9	1030.5	1041.5
42.5°	881.2	897.8	940.2	984.4	995.5
45°	829.6	848.0	892.2	938.3	951.2
47.5°	779.8	794.5	844.3	888.5	907.0
50°	726.3	741.1	789.0	838.8	857.2
52.5°	671.0	691.3	742.9	790.8	813.0
55°	617.6	637.8	691.3	739.2	759.5
57.5°	567.8	584.4	639.7	689.4	709.7
60°	514.3	529.1	588.1	641.5	660.0
62.5°	457.2	479.3	540.1	589.9	612.0
65°	405.6	429.5	494.0	542.0	564.1
67.5°	357.6	379.7	442.4	494.0	518.0
70°	302.3	331.8	396.3	448.0	470.1
72.5°	258.1	283.9	350.3	401.9	425.8
75°	206.5	237.8	304.2	355.8	374.2
77.5°	164.1	195.4	258.1	298.6	307.9
80°	119.8	151.2	210.2	230.4	236.0
82.5°	81.1	110.6	151.2	156.7	158.5
85°	49.8	68.2	88.5	88.5	88.5
87.5°	24.0	27.7	31.3	29.5	29.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)