

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: P309117

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CP125-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: P309117
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-4500K
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: 4166.0 lumens
Efficiency: N/A
Efficacy: 109.9 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

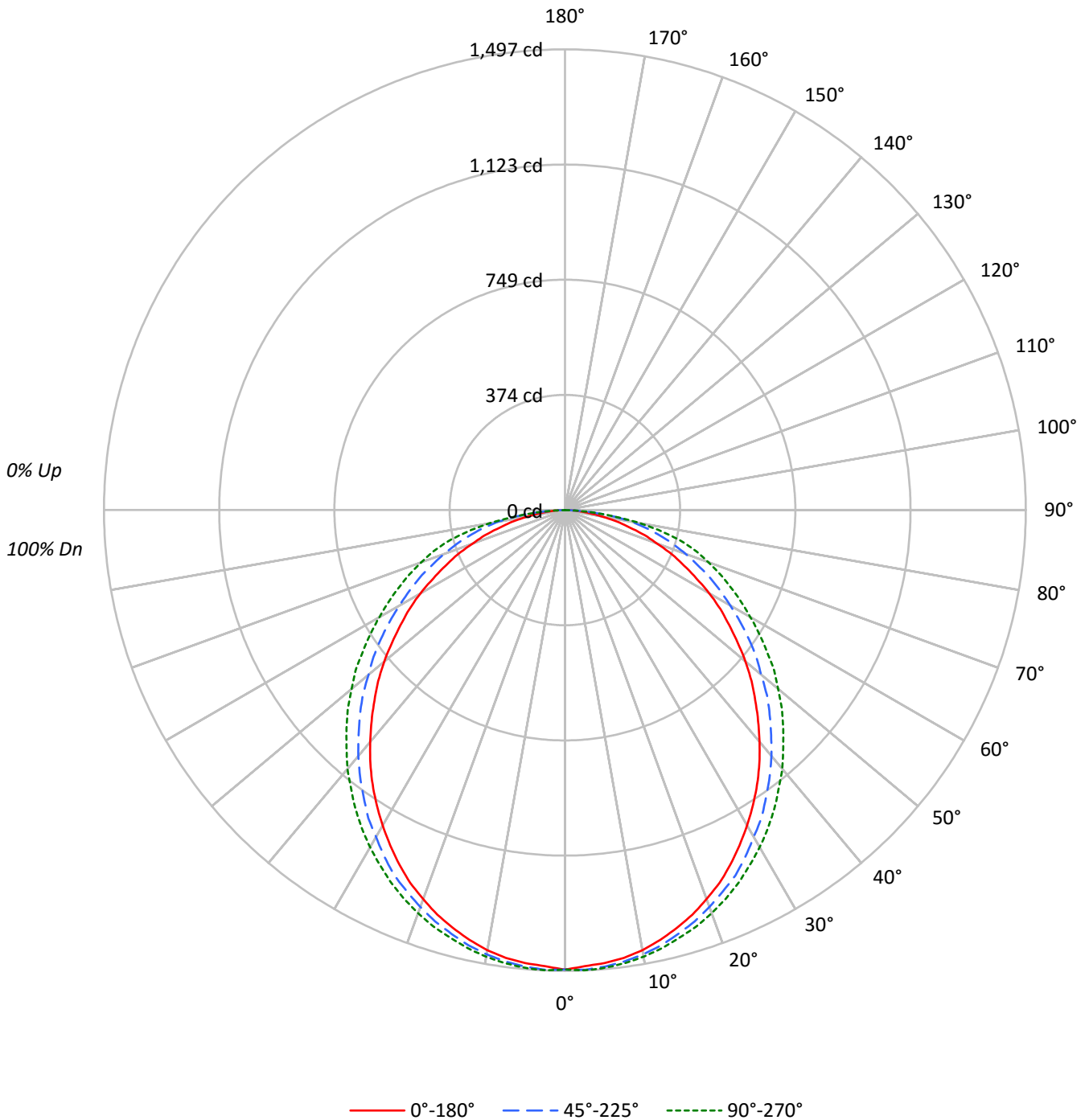
Input Watts (W): 37.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4017	4017	4017
5°	3991	4022	4032
10°	3968	4005	4026
15°	3915	3969	4007
20°	3852	3930	3991
25°	3774	3890	3965
30°	3678	3811	3932
35°	3576	3742	3895
40°	3455	3667	3858
45°	3329	3580	3817
50°	3206	3483	3784
55°	3055	3420	3757
60°	2919	3337	3745
65°	2723	3317	3787
70°	2508	3288	3900
75°	2263	3334	4103
80°	1957	3434	3856
85°	1621	2881	2881



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.2	3.4
10°-20°	401.8	9.6
20°-30°	601.1	14.4
30°-40°	711.9	17.1
40°-50°	725.5	17.4
50°-60°	650.2	15.6
60°-70°	509.1	12.2
70°-80°	328.3	7.9
80°-90°	97.0	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°	1144.0	27.5
0°-40°	1855.9	44.5
0°-60°	3231.7	77.6
0°-90°	4166.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4166.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1493	1493	1493	1493	1493	
5°	1477	1481	1489	1491	1493	140
15°	1405	1413	1425	1436	1438	396
25°	1271	1283	1310	1328	1335	585
35°	1088	1102	1139	1174	1186	680
45°	875	894	941	989	1003	675
55°	651	672	729	779	801	584
65°	428	453	521	572	595	425
75°	218	251	321	375	395	233
85°	52	72	93	93	93	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1492.8	1492.8	1492.8	1492.8	1492.8
2.5°	1483.1	1487.0	1494.8	1496.7	1496.7
5°	1477.3	1481.1	1488.9	1490.9	1492.8
7.5°	1467.5	1469.5	1479.2	1483.1	1485.0
10°	1452.0	1455.9	1465.6	1471.4	1473.4
12.5°	1430.6	1436.4	1448.1	1455.9	1457.8
15°	1405.3	1413.1	1424.8	1436.4	1438.4
17.5°	1378.1	1385.9	1401.5	1415.1	1418.9
20°	1345.1	1354.8	1372.3	1387.8	1393.7
22.5°	1312.0	1319.8	1341.2	1360.6	1366.5
25°	1271.2	1282.9	1310.1	1327.6	1335.4
27.5°	1228.5	1242.1	1269.3	1292.6	1300.4
30°	1183.7	1197.4	1226.5	1255.7	1265.4
32.5°	1137.1	1152.6	1187.6	1216.8	1226.5
35°	1088.5	1102.1	1139.0	1174.0	1185.7
37.5°	1038.0	1049.6	1092.4	1129.3	1141.0
40°	983.5	999.1	1043.8	1086.6	1098.2
42.5°	929.1	946.6	991.3	1038.0	1049.6
45°	874.7	894.1	940.8	989.4	1003.0
47.5°	822.2	837.8	890.2	936.9	956.3
50°	765.8	781.4	831.9	884.4	903.8
52.5°	707.5	728.9	783.3	833.9	857.2
55°	651.2	672.5	728.9	779.4	800.8
57.5°	598.7	616.2	674.5	727.0	748.3
60°	542.3	557.9	620.1	676.4	695.9
62.5°	482.1	505.4	569.5	622.0	645.3
65°	427.6	452.9	520.9	571.5	594.8
67.5°	377.1	400.4	466.5	520.9	546.2
70°	318.8	349.9	417.9	472.3	495.7
72.5°	272.1	299.3	369.3	423.7	449.0
75°	217.7	250.7	320.7	375.1	394.6
77.5°	173.0	206.0	272.1	314.9	324.6
80°	126.3	159.4	221.6	243.0	248.8
82.5°	85.5	116.6	159.4	165.2	167.2
85°	52.5	71.9	93.3	93.3	93.3
87.5°	25.3	29.2	33.0	31.1	31.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)