

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: P309109

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CA125-W2A-U-5000K**

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: P309109
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-CA125-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 4306.0 lumens
Efficiency: N/A
Efficacy: 113.0 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

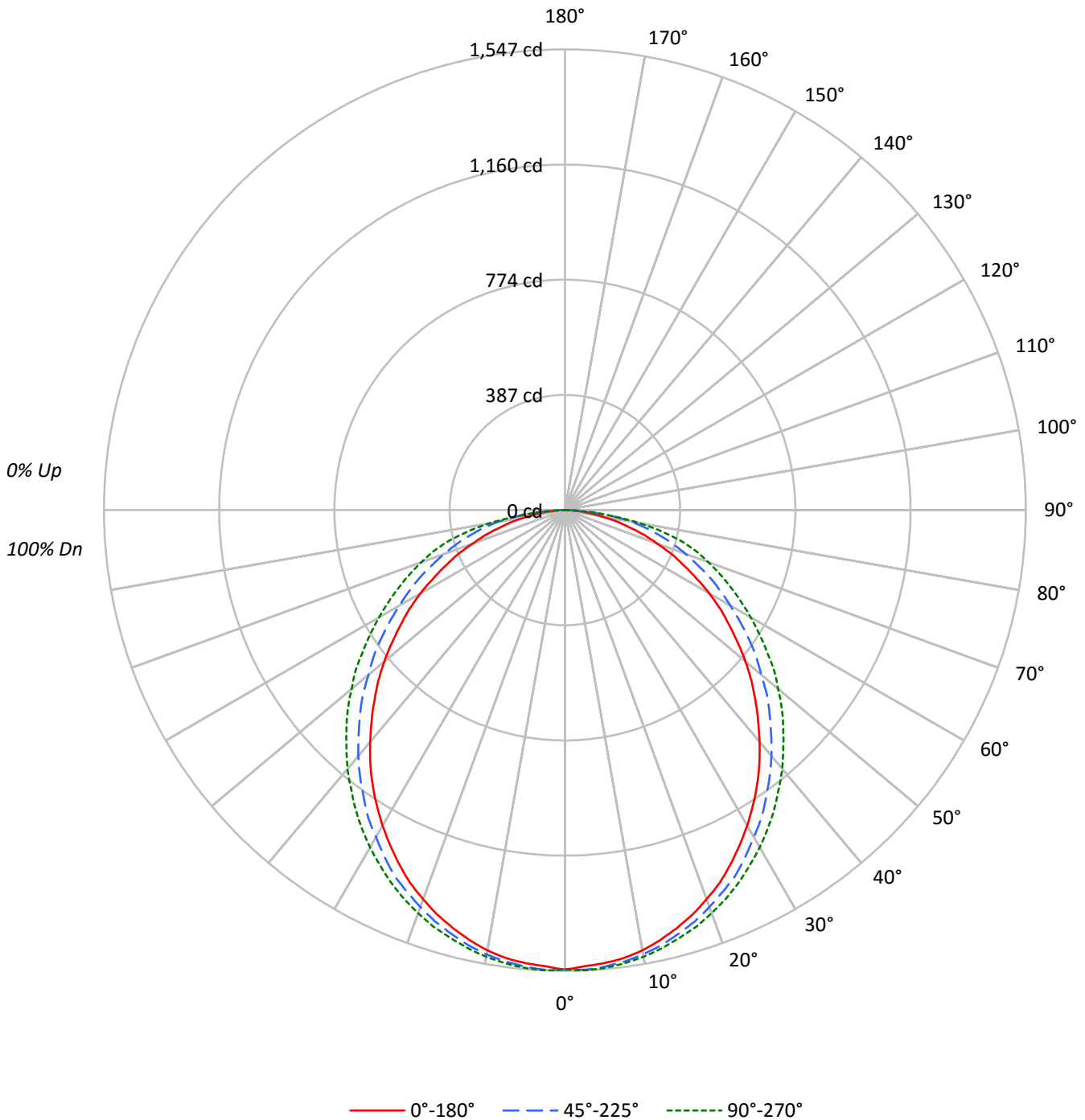
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4152	4152	4152
5°	4125	4157	4168
10°	4101	4139	4161
15°	4047	4103	4142
20°	3981	4062	4125
25°	3901	4021	4098
30°	3802	3939	4064
35°	3696	3868	4026
40°	3571	3790	3987
45°	3441	3701	3945
50°	3314	3600	3911
55°	3157	3535	3883
60°	3017	3449	3871
65°	2814	3428	3915
70°	2592	3399	4031
75°	2339	3447	4240
80°	2024	3549	3986
85°	1673	2976	2976



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.9	3.4
10°-20°	415.3	9.6
20°-30°	621.3	14.4
30°-40°	735.8	17.1
40°-50°	749.9	17.4
50°-60°	672.1	15.6
60°-70°	526.2	12.2
70°-80°	339.3	7.9
80°-90°	100.2	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°	1182.5	27.5
0°-40°	1918.3	44.5
0°-60°	3340.3	77.6
0°-90°	4306.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4306.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1543	1543	1543	1543	1543	
5°	1527	1531	1539	1541	1543	145
15°	1453	1461	1473	1485	1487	410
25°	1314	1326	1354	1372	1380	605
35°	1125	1139	1177	1214	1226	703
45°	904	924	972	1023	1037	698
55°	673	695	753	806	828	603
65°	442	468	538	591	615	439
75°	225	259	332	388	408	241
85°	54	74	96	96	96	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1543.0	1543.0	1543.0	1543.0	1543.0
2.5°	1532.9	1536.9	1545.0	1547.0	1547.0
5°	1526.9	1530.9	1539.0	1541.0	1543.0
7.5°	1516.9	1518.9	1528.9	1532.9	1534.9
10°	1500.8	1504.8	1514.8	1520.9	1522.9
12.5°	1478.7	1484.7	1496.8	1504.8	1506.8
15°	1452.6	1460.6	1472.7	1484.7	1486.7
17.5°	1424.4	1432.5	1448.5	1462.6	1466.6
20°	1390.3	1400.3	1418.4	1434.5	1440.5
22.5°	1356.1	1364.2	1386.3	1406.4	1412.4
25°	1313.9	1326.0	1354.1	1372.2	1380.2
27.5°	1269.7	1283.8	1311.9	1336.0	1344.1
30°	1223.5	1237.6	1267.7	1297.9	1307.9
32.5°	1175.3	1191.4	1227.5	1257.7	1267.7
35°	1125.1	1139.1	1177.3	1213.5	1225.5
37.5°	1072.8	1084.9	1129.1	1167.3	1179.3
40°	1016.6	1032.7	1078.9	1123.1	1135.1
42.5°	960.3	978.4	1024.6	1072.8	1084.9
45°	904.1	924.2	972.4	1022.6	1036.7
47.5°	849.8	865.9	920.2	968.4	988.5
50°	791.6	807.7	859.9	914.1	934.2
52.5°	731.3	753.4	809.7	861.9	886.0
55°	673.0	695.1	753.4	805.6	827.7
57.5°	618.8	636.9	697.2	751.4	773.5
60°	560.5	576.6	640.9	699.2	719.3
62.5°	498.3	522.4	588.7	642.9	667.0
65°	442.0	468.1	538.4	590.7	614.8
67.5°	389.8	413.9	482.2	538.4	564.6
70°	329.5	361.6	432.0	488.2	512.3
72.5°	281.3	309.4	381.7	438.0	464.1
75°	225.0	259.2	331.5	387.8	407.8
77.5°	178.8	213.0	281.3	325.5	335.5
80°	130.6	164.7	229.0	251.1	257.2
82.5°	88.4	120.5	164.7	170.8	172.8
85°	54.2	74.3	96.4	96.4	96.4
87.5°	26.1	30.1	34.2	32.1	32.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)