

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: P314347

Luminaire Tested: **24FCZ2-45-UNV-L83050-S-CA125-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: P314347
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45-UNV-L83050-S-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 4555.0 lumens
Efficiency: N/A
Efficacy: 118.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

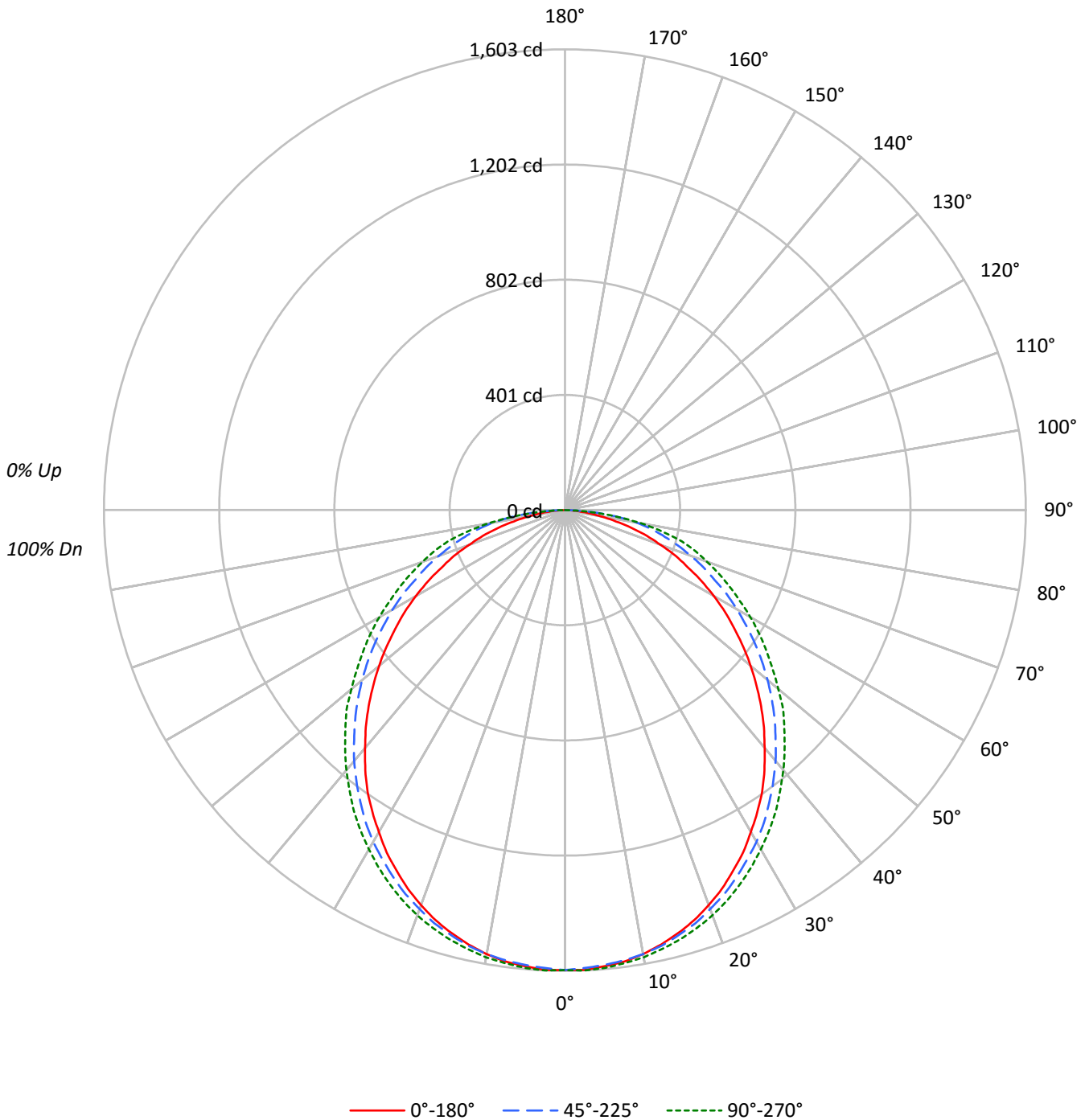
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2153	2153	2153
5°	2152	2146	2159
10°	2143	2143	2159
15°	2122	2132	2154
20°	2094	2115	2148
25°	2056	2094	2135
30°	2010	2070	2117
35°	1965	2037	2101
40°	1898	2002	2076
45°	1836	1963	2054
50°	1766	1926	2029
55°	1687	1890	2009
60°	1608	1861	2005
65°	1506	1829	2018
70°	1395	1838	2072
75°	1249	1873	2189
80°	1009	1984	2141
85°	760	1743	1698



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.5	3.3
10°-20°	432.9	9.5
20°-30°	650.7	14.3
30°-40°	775.1	17.0
40°-50°	793.3	17.4
50°-60°	714.2	15.7
60°-70°	560.8	12.3
70°-80°	364.0	8.0
80°-90°	112.6	2.5
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°	1235.1	27.1
0°-40°	2010.1	44.1
0°-60°	3517.6	77.2
0°-90°	4555.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4555.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1600	1600	1600	1600	1600	
5°	1593	1596	1589	1597	1599	151
15°	1524	1528	1531	1544	1547	430
25°	1385	1396	1411	1434	1438	638
35°	1196	1211	1240	1270	1279	746
45°	965	988	1032	1071	1079	744
55°	719	751	806	848	856	645
65°	473	509	574	622	634	471
75°	240	286	360	410	421	254
85°	49	91	113	110	110	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1600.2	1600.2	1600.2	1600.2	1600.2
2.5°	1601.6	1601.6	1594.4	1601.6	1603.1
5°	1593.0	1595.9	1588.6	1597.3	1598.8
7.5°	1584.3	1584.3	1579.9	1588.6	1590.1
10°	1568.4	1569.8	1568.4	1578.5	1579.9
12.5°	1548.1	1551.0	1552.5	1562.6	1564.0
15°	1523.5	1527.9	1530.8	1543.8	1546.7
17.5°	1496.0	1500.4	1507.6	1522.1	1525.0
20°	1462.8	1468.5	1477.2	1496.0	1500.4
22.5°	1426.6	1432.4	1446.8	1464.2	1471.4
25°	1384.6	1396.2	1410.7	1433.8	1438.2
27.5°	1342.7	1352.8	1371.6	1396.2	1402.0
30°	1293.5	1309.4	1332.5	1357.1	1362.9
32.5°	1245.7	1261.6	1289.1	1315.2	1322.4
35°	1196.5	1211.0	1239.9	1270.3	1279.0
37.5°	1140.1	1158.9	1190.7	1221.1	1229.8
40°	1080.8	1103.9	1140.1	1171.9	1182.1
42.5°	1024.4	1049.0	1085.1	1119.9	1131.4
45°	965.0	988.2	1031.6	1070.7	1079.3
47.5°	904.3	930.3	976.6	1015.7	1030.1
50°	843.5	871.0	920.2	960.7	969.4
52.5°	782.7	811.7	863.8	907.2	911.5
55°	719.1	750.9	805.9	847.8	856.5
57.5°	661.2	688.7	748.0	791.4	801.5
60°	597.5	627.9	691.6	732.1	745.1
62.5°	536.8	568.6	635.2	675.7	687.2
65°	473.1	509.3	574.4	622.1	633.7
67.5°	418.1	452.9	522.3	568.6	580.2
70°	354.5	393.5	467.3	515.1	526.6
72.5°	299.5	340.0	413.8	460.1	477.5
75°	240.2	286.5	360.3	409.5	421.0
77.5°	182.3	235.8	311.1	348.7	348.7
80°	130.2	186.6	256.1	273.5	276.3
82.5°	85.4	140.3	189.5	188.1	188.1
85°	49.2	91.2	112.9	110.0	110.0
87.5°	18.8	37.6	40.5	40.5	39.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)