

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: P314348

Luminaire Tested: **24FCZ2-45-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: P314348
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-4500K
Description: 2'X4' 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: 4598.0 lumens
Efficiency: N/A
Efficacy: 116.7 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

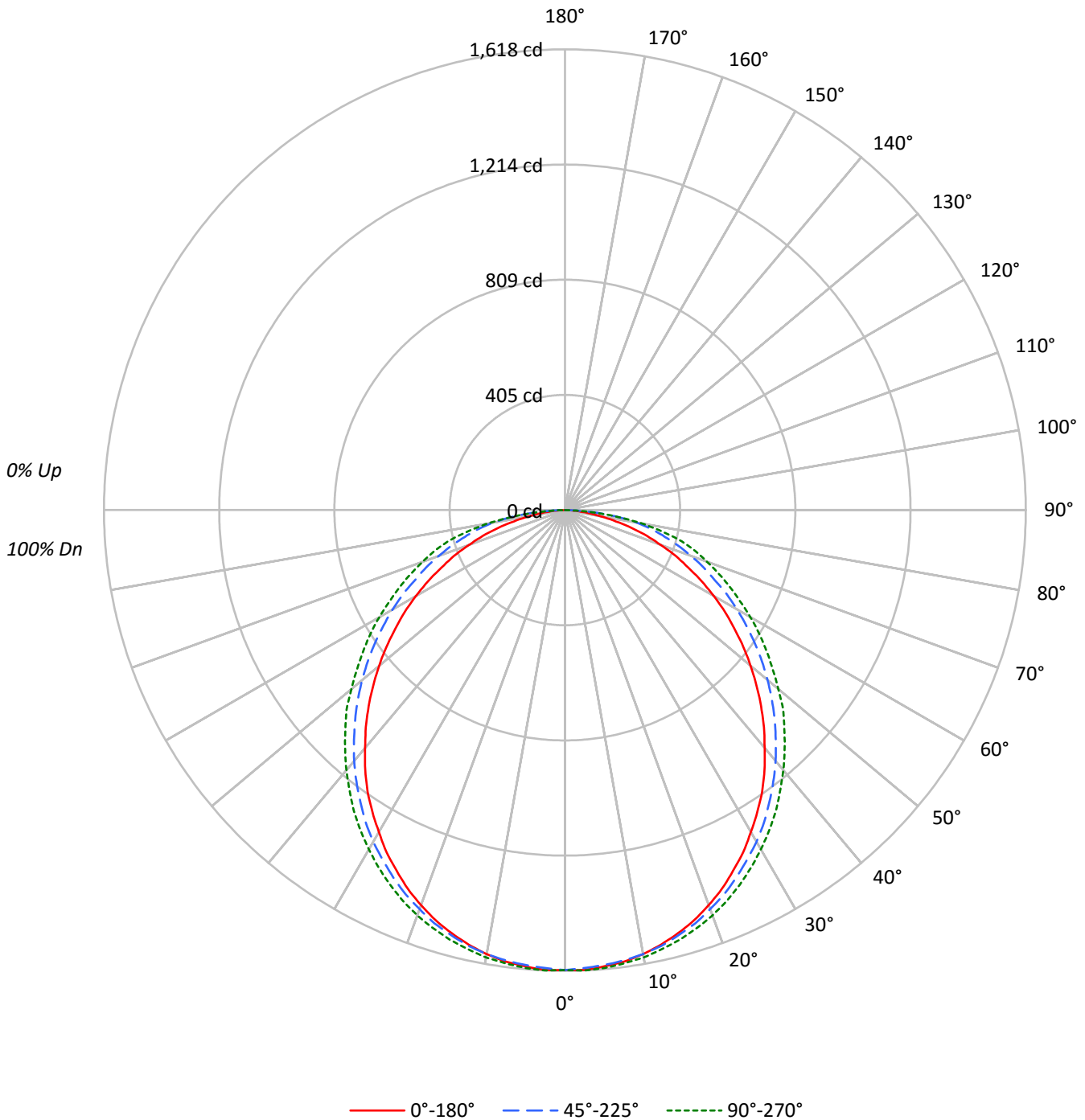
Input Watts (W): 39.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2173	2173	2173
5°	2172	2166	2180
10°	2163	2163	2179
15°	2142	2152	2175
20°	2114	2135	2169
25°	2075	2114	2155
30°	2029	2090	2137
35°	1984	2056	2121
40°	1916	2021	2096
45°	1854	1981	2073
50°	1782	1944	2048
55°	1703	1908	2028
60°	1623	1879	2024
65°	1521	1846	2037
70°	1408	1856	2091
75°	1260	1891	2209
80°	1018	2003	2162
85°	767	1758	1714



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.9	3.3
10°-20°	437.0	9.5
20°-30°	656.8	14.3
30°-40°	782.4	17.0
40°-50°	800.8	17.4
50°-60°	720.9	15.7
60°-70°	566.1	12.3
70°-80°	367.4	8.0
80°-90°	113.6	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°	1246.7	27.1
0°-40°	2029.1	44.1
0°-60°	3550.8	77.2
0°-90°	4598.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4598.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1615	1615	1615	1615	1615	
5°	1608	1611	1604	1612	1614	153
15°	1538	1542	1545	1558	1561	434
25°	1398	1409	1424	1447	1452	644
35°	1208	1222	1252	1282	1291	754
45°	974	998	1041	1081	1090	751
55°	726	758	814	856	865	651
65°	478	514	580	628	640	475
75°	242	289	364	413	425	257
85°	50	92	114	111	111	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1615.3	1615.3	1615.3	1615.3	1615.3
2.5°	1616.8	1616.8	1609.5	1616.8	1618.2
5°	1608.0	1610.9	1603.6	1612.4	1613.8
7.5°	1599.2	1599.2	1594.9	1603.6	1605.1
10°	1583.2	1584.6	1583.2	1593.4	1594.9
12.5°	1562.7	1565.7	1567.1	1577.3	1578.8
15°	1537.9	1542.3	1545.2	1558.3	1561.3
17.5°	1510.2	1514.5	1521.8	1536.4	1539.4
20°	1476.6	1482.4	1491.2	1510.2	1514.5
22.5°	1440.0	1445.9	1460.5	1478.0	1485.3
25°	1397.7	1409.4	1424.0	1447.4	1451.7
27.5°	1355.3	1365.6	1384.5	1409.4	1415.2
30°	1305.7	1321.7	1345.1	1369.9	1375.8
32.5°	1257.5	1273.6	1301.3	1327.6	1334.9
35°	1207.8	1222.4	1251.6	1282.3	1291.1
37.5°	1150.9	1169.9	1202.0	1232.7	1241.4
40°	1091.0	1114.4	1150.9	1183.0	1193.2
42.5°	1034.0	1058.9	1095.4	1130.4	1142.1
45°	974.2	997.5	1041.3	1080.8	1089.5
47.5°	912.8	939.1	985.8	1025.3	1039.9
50°	851.5	879.2	928.9	969.8	978.5
52.5°	790.1	819.3	871.9	915.7	920.1
55°	725.9	758.0	813.5	855.9	864.6
57.5°	667.4	695.2	755.1	798.9	809.1
60°	603.2	633.9	698.1	739.0	752.2
62.5°	541.8	574.0	641.2	682.1	693.7
65°	477.6	514.1	579.8	628.0	639.7
67.5°	422.1	457.1	527.2	574.0	585.7
70°	357.8	397.3	471.7	519.9	531.6
72.5°	302.3	343.2	417.7	464.4	482.0
75°	242.4	289.2	363.7	413.3	425.0
77.5°	184.0	238.1	314.0	352.0	352.0
80°	131.4	188.4	258.5	276.0	279.0
82.5°	86.2	141.7	191.3	189.9	189.9
85°	49.7	92.0	113.9	111.0	111.0
87.5°	19.0	38.0	40.9	40.9	39.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)