

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: P314223

Luminaire Tested: **24FCZ2-35HE-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: P314223
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: 24FCZ2-35HE-UNV-L83050-S-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 3571.0 lumens
Efficiency: N/A
Efficacy: 130.8 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

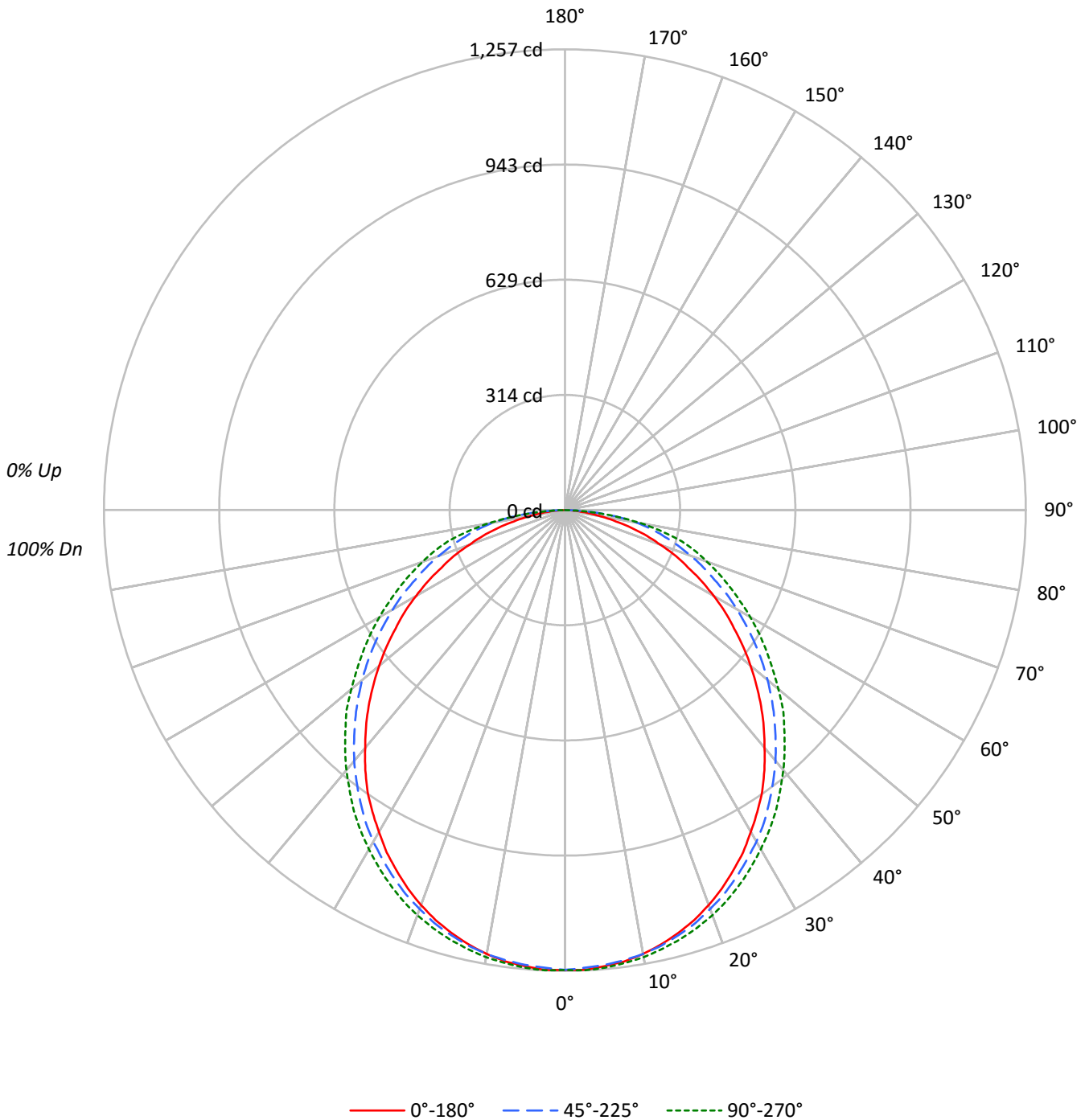
Input Watts (W): 27.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1688	1688	1688
5°	1687	1682	1693
10°	1680	1680	1692
15°	1664	1672	1689
20°	1642	1658	1684
25°	1612	1642	1674
30°	1575	1623	1660
35°	1541	1597	1647
40°	1488	1570	1628
45°	1440	1539	1610
50°	1384	1510	1591
55°	1322	1482	1575
60°	1261	1459	1572
65°	1181	1434	1582
70°	1093	1441	1624
75°	979	1468	1716
80°	791	1556	1678
85°	596	1366	1331



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.8	3.3
10°-20°	339.4	9.5
20°-30°	510.1	14.3
30°-40°	607.6	17.0
40°-50°	621.9	17.4
50°-60°	559.9	15.7
60°-70°	439.7	12.3
70°-80°	285.4	8.0
80°-90°	88.3	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°	968.3	27.1
0°-40°	1575.9	44.1
0°-60°	2757.7	77.2
0°-90°	3571.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3571.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1254	1254	1254	1254	1254	
5°	1249	1251	1245	1252	1253	119
15°	1194	1198	1200	1210	1212	337
25°	1086	1095	1106	1124	1128	500
35°	938	949	972	996	1003	585
45°	757	775	809	839	846	583
55°	564	589	632	665	672	505
65°	371	399	450	488	497	369
75°	188	225	282	321	330	199
85°	39	72	88	86	86	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1254.5	1254.5	1254.5	1254.5	1254.5
2.5°	1255.6	1255.6	1250.0	1255.6	1256.8
5°	1248.8	1251.1	1245.4	1252.2	1253.4
7.5°	1242.0	1242.0	1238.6	1245.4	1246.6
10°	1229.6	1230.7	1229.6	1237.5	1238.6
12.5°	1213.7	1216.0	1217.1	1225.0	1226.2
15°	1194.4	1197.8	1200.1	1210.3	1212.5
17.5°	1172.8	1176.3	1181.9	1193.3	1195.5
20°	1146.8	1151.3	1158.1	1172.8	1176.3
22.5°	1118.4	1122.9	1134.3	1147.9	1153.6
25°	1085.5	1094.6	1105.9	1124.1	1127.5
27.5°	1052.6	1060.6	1075.3	1094.6	1099.1
30°	1014.0	1026.5	1044.7	1064.0	1068.5
32.5°	976.6	989.1	1010.6	1031.1	1036.7
35°	938.1	949.4	972.1	995.9	1002.7
37.5°	893.8	908.6	933.5	957.3	964.1
40°	847.3	865.5	893.8	918.8	926.7
42.5°	803.1	822.4	850.7	877.9	887.0
45°	756.6	774.7	808.7	839.4	846.2
47.5°	708.9	729.3	765.6	796.3	807.6
50°	661.3	682.8	721.4	753.2	760.0
52.5°	613.6	636.3	677.2	711.2	714.6
55°	563.7	588.7	631.8	664.7	671.5
57.5°	518.4	539.9	586.4	620.5	628.4
60°	468.5	492.3	542.2	573.9	584.2
62.5°	420.8	445.8	497.9	529.7	538.8
65°	370.9	399.3	450.3	487.7	496.8
67.5°	327.8	355.0	409.5	445.8	454.8
70°	277.9	308.5	366.4	403.8	412.9
72.5°	234.8	266.6	324.4	360.7	374.3
75°	188.3	224.6	282.4	321.0	330.1
77.5°	142.9	184.9	243.9	273.4	273.4
80°	102.1	146.3	200.8	214.4	216.6
82.5°	66.9	110.0	148.6	147.5	147.5
85°	38.6	71.5	88.5	86.2	86.2
87.5°	14.7	29.5	31.8	31.8	30.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)