

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: P311407

Luminaire Tested: **24FCZ2-40-UNV-L82765-S-CA125-W2A-U-6500K**

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: P311407
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: 24FCZ2-40-UNV-L82765-S-CA125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 6500K 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: 4050.0 lumens
Efficiency: N/A
Efficacy: 118.4 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

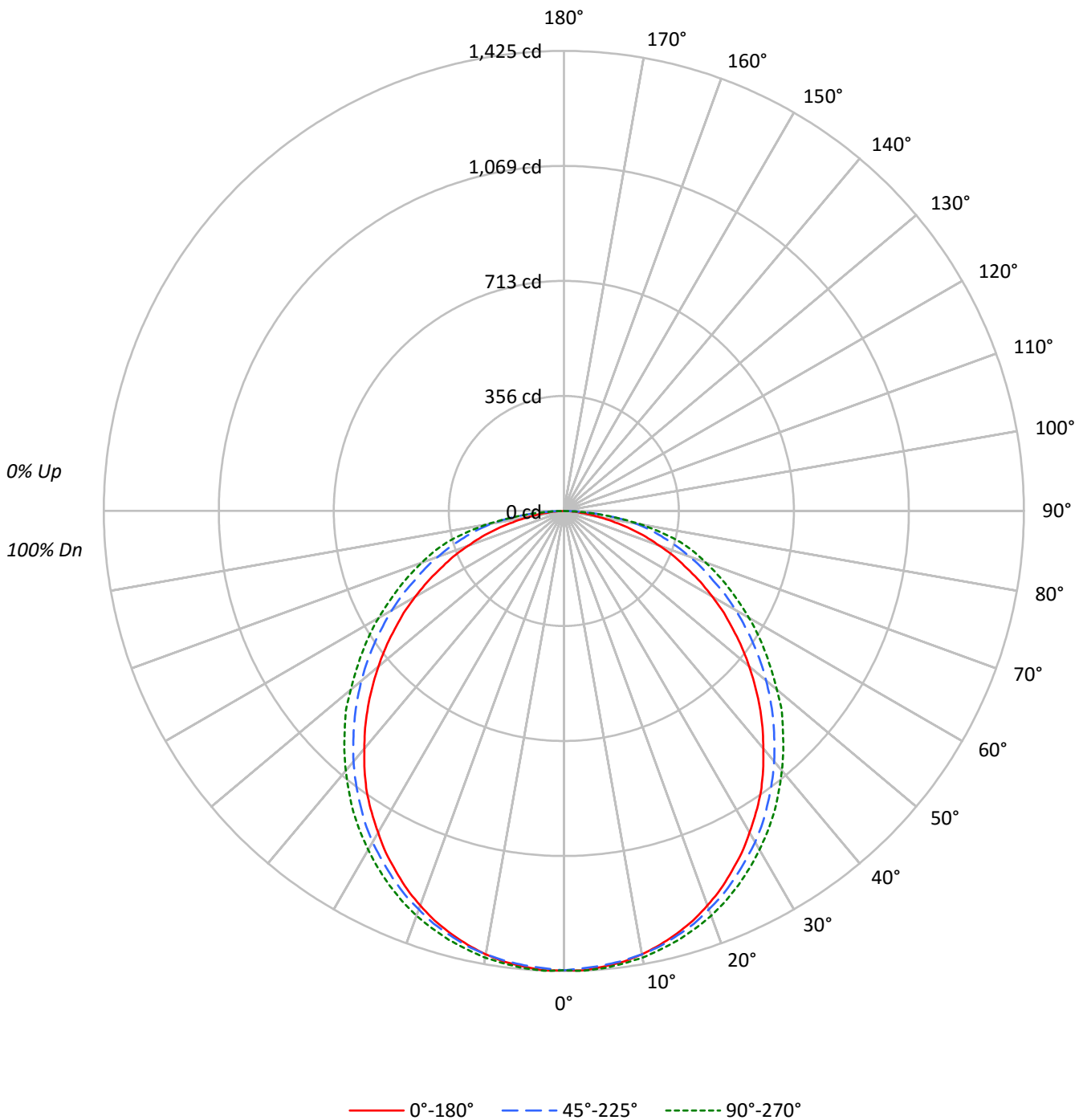
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1914	1914	1914
5°	1913	1908	1920
10°	1905	1905	1919
15°	1887	1896	1916
20°	1862	1881	1910
25°	1828	1862	1898
30°	1787	1841	1883
35°	1747	1811	1868
40°	1688	1780	1846
45°	1633	1745	1826
50°	1570	1713	1804
55°	1500	1681	1787
60°	1430	1655	1783
65°	1339	1626	1794
70°	1240	1635	1842
75°	1110	1665	1946
80°	897	1764	1904
85°	675	1548	1510



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.7	3.3
10°-20°	384.9	9.5
20°-30°	578.6	14.3
30°-40°	689.1	17.0
40°-50°	705.3	17.4
50°-60°	635.0	15.7
60°-70°	498.7	12.3
70°-80°	323.6	8.0
80°-90°	100.1	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°	1098.1	27.1
0°-40°	1787.3	44.1
0°-60°	3127.6	77.2
0°-90°	4050.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4050.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1423	1423	1423	1423	1423	
5°	1416	1419	1412	1420	1422	135
15°	1355	1358	1361	1373	1375	382
25°	1231	1241	1254	1275	1279	567
35°	1064	1077	1102	1130	1137	664
45°	858	879	917	952	960	662
55°	639	668	716	754	762	573
65°	421	453	511	553	564	419
75°	214	255	320	364	374	226
85°	44	81	100	98	98	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1422.8	1422.8	1422.8	1422.8	1422.8
2.5°	1424.1	1424.1	1417.6	1424.1	1425.4
5°	1416.4	1418.9	1412.5	1420.2	1421.5
7.5°	1408.6	1408.6	1404.8	1412.5	1413.8
10°	1394.5	1395.8	1394.5	1403.5	1404.8
12.5°	1376.5	1379.1	1380.3	1389.3	1390.6
15°	1354.6	1358.5	1361.0	1372.6	1375.2
17.5°	1330.2	1334.0	1340.5	1353.3	1355.9
20°	1300.6	1305.7	1313.4	1330.2	1334.0
22.5°	1268.4	1273.6	1286.4	1301.9	1308.3
25°	1231.1	1241.4	1254.3	1274.9	1278.7
27.5°	1193.8	1202.8	1219.5	1241.4	1246.6
30°	1150.1	1164.2	1184.8	1206.7	1211.8
32.5°	1107.6	1121.8	1146.2	1169.4	1175.8
35°	1063.9	1076.7	1102.5	1129.5	1137.2
37.5°	1013.7	1030.4	1058.7	1085.7	1093.5
40°	961.0	981.5	1013.7	1042.0	1051.0
42.5°	910.8	932.7	964.8	995.7	1006.0
45°	858.0	878.6	917.2	952.0	959.7
47.5°	804.0	827.2	868.3	903.1	915.9
50°	750.0	774.4	818.2	854.2	861.9
52.5°	696.0	721.7	768.0	806.6	810.5
55°	639.4	667.7	716.5	753.8	761.6
57.5°	587.9	612.3	665.1	703.7	712.7
60°	531.3	558.3	614.9	650.9	662.5
62.5°	477.3	505.6	564.7	600.8	611.1
65°	420.7	452.8	510.7	553.2	563.5
67.5°	371.8	402.7	464.4	505.6	515.9
70°	315.2	349.9	415.5	458.0	468.3
72.5°	266.3	302.3	367.9	409.1	424.5
75°	213.5	254.7	320.3	364.1	374.4
77.5°	162.1	209.7	276.6	310.0	310.0
80°	115.8	165.9	227.7	243.1	245.7
82.5°	75.9	124.8	168.5	167.2	167.2
85°	43.7	81.0	100.3	97.8	97.8
87.5°	16.7	33.4	36.0	36.0	34.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)