

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: P313898

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-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: P313898
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40HE-UNV-L83050-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 3933.0 lumens
Efficiency: N/A
Efficacy: 123.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

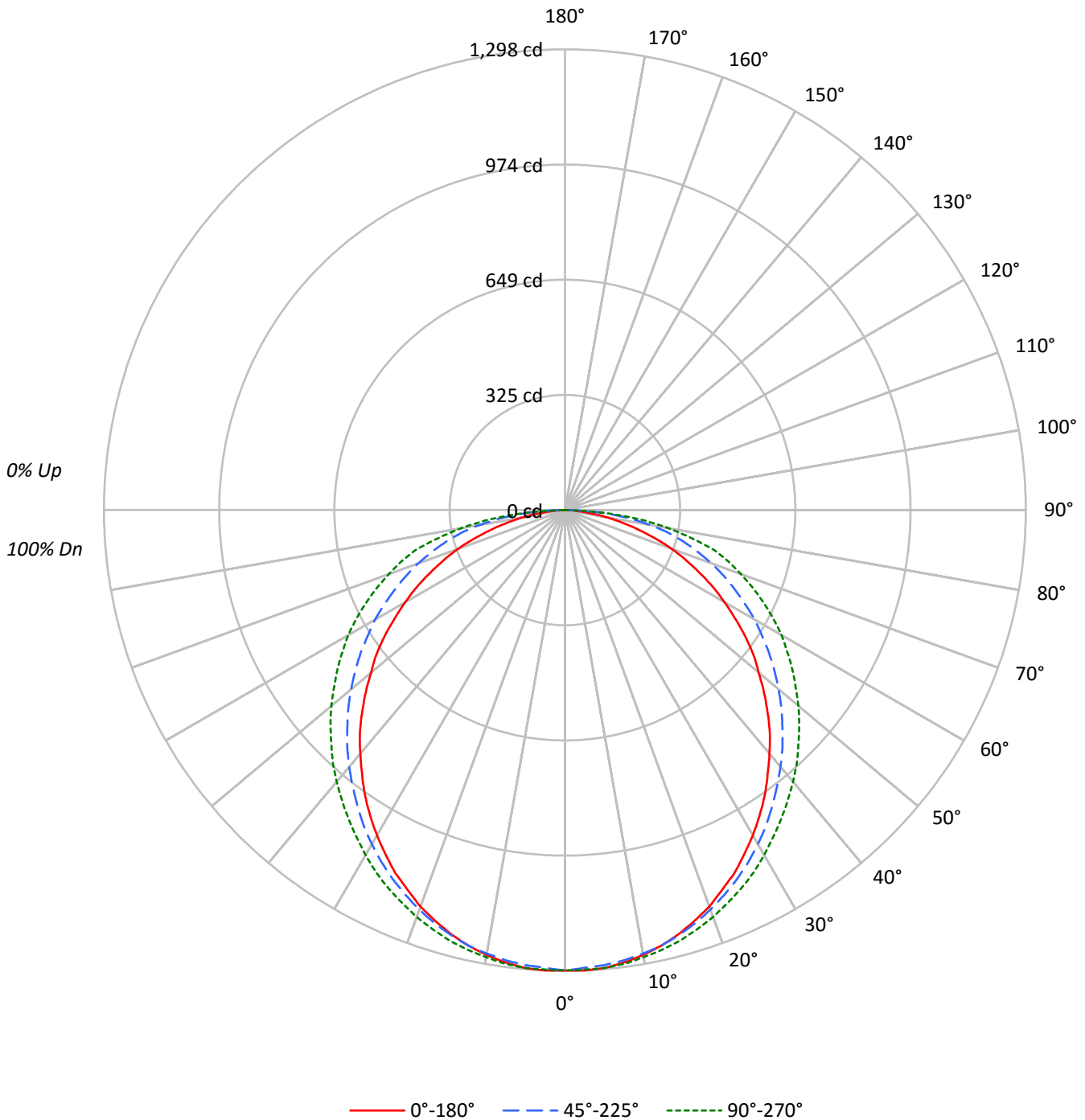
Input Watts (W): 31.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313898

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-CA125-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P313898

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-CA125-W2A-U-4500K

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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1745	1745	1745
5°	1748	1738	1748
10°	1738	1733	1747
15°	1723	1727	1749
20°	1702	1715	1747
25°	1676	1703	1745
30°	1644	1689	1743
35°	1612	1672	1745
40°	1575	1659	1756
45°	1537	1649	1770
50°	1491	1644	1797
55°	1454	1647	1833
60°	1397	1661	1896
65°	1334	1678	1965
70°	1263	1730	2074
75°	1126	1804	2266
80°	961	1911	2315
85°	685	1894	2215



TEST NUMBER: P313898

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-CA125-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.8	3.1
10°-20°	351.0	8.9
20°-30°	530.1	13.5
30°-40°	638.9	16.2
40°-50°	670.8	17.1
50°-60°	627.5	16.0
60°-70°	518.2	13.2
70°-80°	353.1	9.0
80°-90°	120.4	3.1
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°	1003.9	25.5
0°-40°	1642.8	41.8
0°-60°	2941.2	74.8
0°-90°	3933.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3933.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1297	1297	1297	1297	1297	
5°	1294	1293	1287	1294	1294	123
15°	1237	1238	1240	1253	1255	349
25°	1129	1134	1147	1169	1176	519
35°	981	992	1018	1052	1062	613
45°	808	825	866	913	930	623
55°	620	645	702	760	782	553
65°	419	454	527	594	617	415
75°	217	266	347	412	436	231
85°	44	87	123	138	144	56
90°	0	0	0	0	0	



TEST NUMBER: P313898

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-CA125-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1297.1	1297.1	1297.1	1297.1	1297.1
2.5°	1298.4	1297.1	1290.5	1297.1	1295.8
5°	1294.5	1293.2	1286.6	1294.5	1294.5
7.5°	1285.3	1285.3	1278.8	1287.9	1289.2
10°	1272.3	1272.3	1268.4	1278.8	1278.8
12.5°	1256.6	1256.6	1256.6	1267.1	1268.4
15°	1237.0	1238.3	1239.7	1252.7	1255.3
17.5°	1213.6	1216.2	1220.1	1235.7	1238.3
20°	1188.8	1191.4	1197.9	1216.2	1220.1
22.5°	1157.4	1164.0	1173.1	1194.0	1197.9
25°	1128.7	1134.0	1147.0	1169.2	1175.7
27.5°	1093.5	1101.3	1118.3	1141.8	1150.9
30°	1058.3	1066.1	1087.0	1114.4	1122.2
32.5°	1020.4	1032.2	1054.4	1083.1	1092.2
35°	981.3	991.7	1017.8	1051.7	1062.2
37.5°	938.2	952.6	981.3	1017.8	1030.9
40°	896.5	912.1	944.7	983.9	999.6
42.5°	854.7	870.4	906.9	951.3	966.9
45°	807.7	824.7	866.5	913.4	930.4
47.5°	760.8	781.6	827.3	876.9	895.2
50°	712.5	736.0	785.5	837.7	858.6
52.5°	669.4	691.6	743.8	799.9	819.5
55°	619.8	644.6	702.0	759.5	781.6
57.5°	568.9	596.3	657.7	720.3	742.5
60°	519.3	549.4	617.2	679.9	704.6
62.5°	471.1	501.1	571.5	636.8	661.6
65°	418.9	454.1	527.2	593.7	617.2
67.5°	369.3	407.1	484.1	549.4	572.9
70°	321.0	357.5	439.8	503.7	527.2
72.5°	268.8	310.6	392.8	459.3	484.1
75°	216.6	266.2	347.1	412.3	435.8
77.5°	168.3	219.2	300.1	353.6	365.4
80°	124.0	176.2	246.6	284.5	298.8
82.5°	79.6	131.8	187.9	215.3	227.1
85°	44.4	87.4	122.7	138.3	143.5
87.5°	18.3	37.8	49.6	56.1	56.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)