

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: P311367

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-S-CP125-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: P311367
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: 24FCZ2-40HE-UNV-L82765-S-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 3884.0 lumens
Efficiency: N/A
Efficacy: 125.3 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

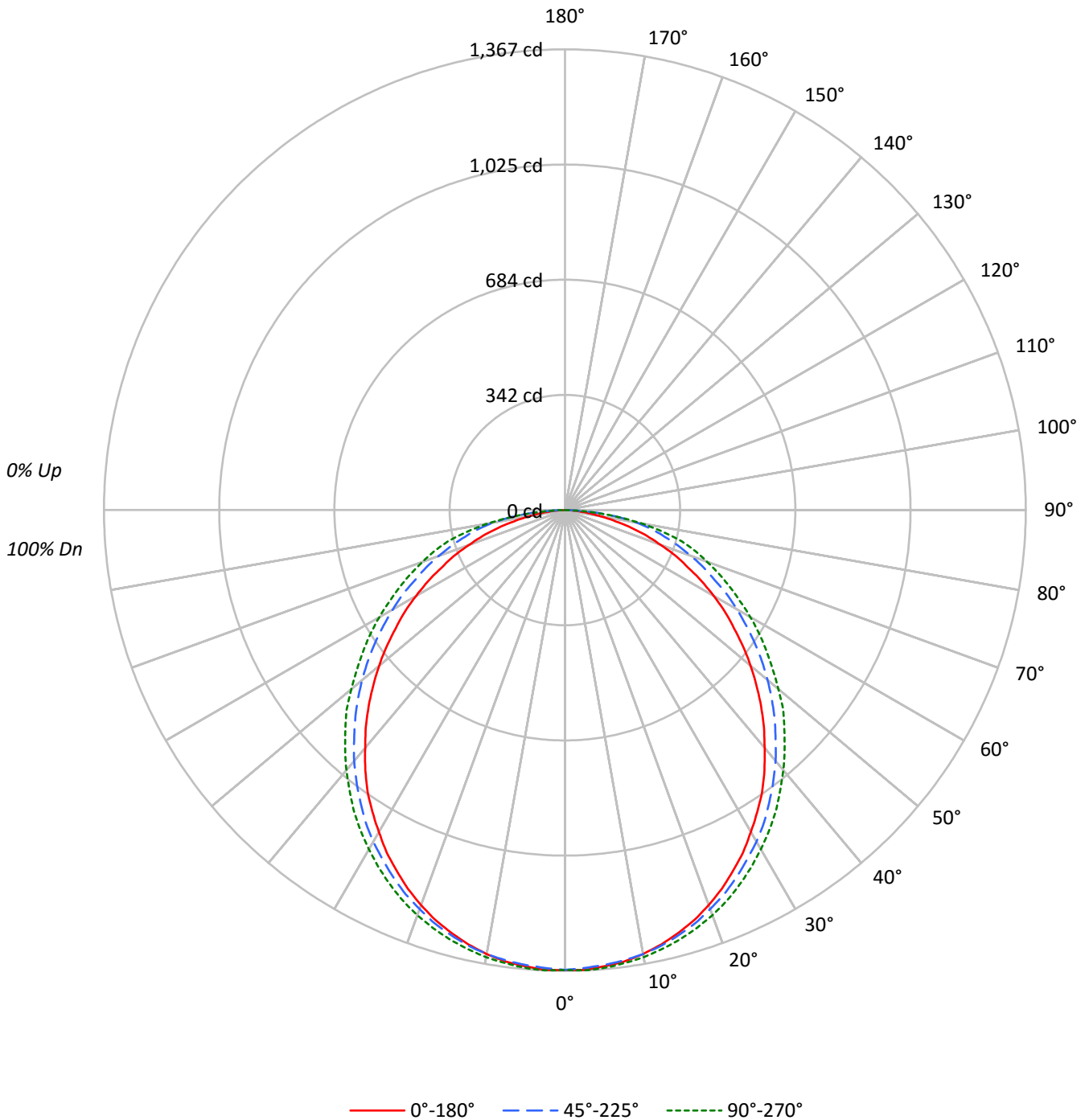
Input Watts (W): 31
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311367

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CP125-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P311367

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CP125-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	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°	1836	1836	1836
5°	1835	1830	1841
10°	1827	1827	1841
15°	1810	1818	1837
20°	1786	1804	1832
25°	1753	1786	1821
30°	1714	1765	1805
35°	1676	1737	1791
40°	1619	1708	1770
45°	1566	1674	1751
50°	1505	1642	1730
55°	1438	1612	1713
60°	1371	1587	1710
65°	1284	1559	1720
70°	1189	1568	1767
75°	1065	1597	1866
80°	860	1692	1826
85°	647	1485	1448



TEST NUMBER: P311367

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CP125-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.2	3.3
10°-20°	369.1	9.5
20°-30°	554.8	14.3
30°-40°	660.9	17.0
40°-50°	676.4	17.4
50°-60°	609.0	15.7
60°-70°	478.2	12.3
70°-80°	310.4	8.0
80°-90°	96.0	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°	1053.1	27.1
0°-40°	1714.0	44.1
0°-60°	2999.4	77.2
0°-90°	3884.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3884.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1364	1364	1364	1364	1364	
5°	1358	1361	1355	1362	1363	129
15°	1299	1303	1305	1316	1319	366
25°	1181	1190	1203	1223	1226	544
35°	1020	1033	1057	1083	1091	637
45°	823	843	880	913	920	634
55°	613	640	687	723	730	550
65°	403	434	490	530	540	402
75°	205	244	307	349	359	217
85°	42	78	96	94	94	51
90°	0	0	0	0	0	



TEST NUMBER: P311367

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CP125-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1364.5	1364.5	1364.5	1364.5	1364.5
2.5°	1365.7	1365.7	1359.5	1365.7	1366.9
5°	1358.3	1360.8	1354.6	1362.0	1363.2
7.5°	1350.9	1350.9	1347.2	1354.6	1355.8
10°	1337.3	1338.6	1337.3	1346.0	1347.2
12.5°	1320.1	1322.5	1323.8	1332.4	1333.6
15°	1299.1	1302.8	1305.3	1316.4	1318.8
17.5°	1275.6	1279.3	1285.5	1297.9	1300.3
20°	1247.3	1252.2	1259.6	1275.6	1279.3
22.5°	1216.4	1221.4	1233.7	1248.5	1254.7
25°	1180.7	1190.5	1202.9	1222.6	1226.3
27.5°	1144.9	1153.5	1169.5	1190.5	1195.5
30°	1102.9	1116.5	1136.2	1157.2	1162.1
32.5°	1062.2	1075.8	1099.2	1121.4	1127.6
35°	1020.3	1032.6	1057.3	1083.2	1090.6
37.5°	972.2	988.2	1015.3	1041.2	1048.6
40°	921.6	941.3	972.2	999.3	1007.9
42.5°	873.5	894.4	925.3	954.9	964.8
45°	822.9	842.6	879.6	912.9	920.3
47.5°	771.1	793.3	832.7	866.1	878.4
50°	719.2	742.7	784.6	819.2	826.6
52.5°	667.4	692.1	736.5	773.5	777.2
55°	613.1	640.3	687.2	722.9	730.4
57.5°	563.8	587.2	637.8	674.8	683.5
60°	509.5	535.4	589.7	624.3	635.4
62.5°	457.7	484.8	541.6	576.1	586.0
65°	403.4	434.3	489.8	530.5	540.4
67.5°	356.5	386.1	445.4	484.8	494.7
70°	302.3	335.6	398.5	439.2	449.1
72.5°	255.4	289.9	352.8	392.3	407.1
75°	204.8	244.3	307.2	349.1	359.0
77.5°	155.4	201.1	265.2	297.3	297.3
80°	111.0	159.1	218.4	233.2	235.6
82.5°	72.8	119.7	161.6	160.4	160.4
85°	41.9	77.7	96.2	93.8	93.8
87.5°	16.0	32.1	34.5	34.5	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)