

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: P310687

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-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: P310687
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-L82765-CA125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 3878.0 lumens
Efficiency: N/A
Efficacy: 121.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

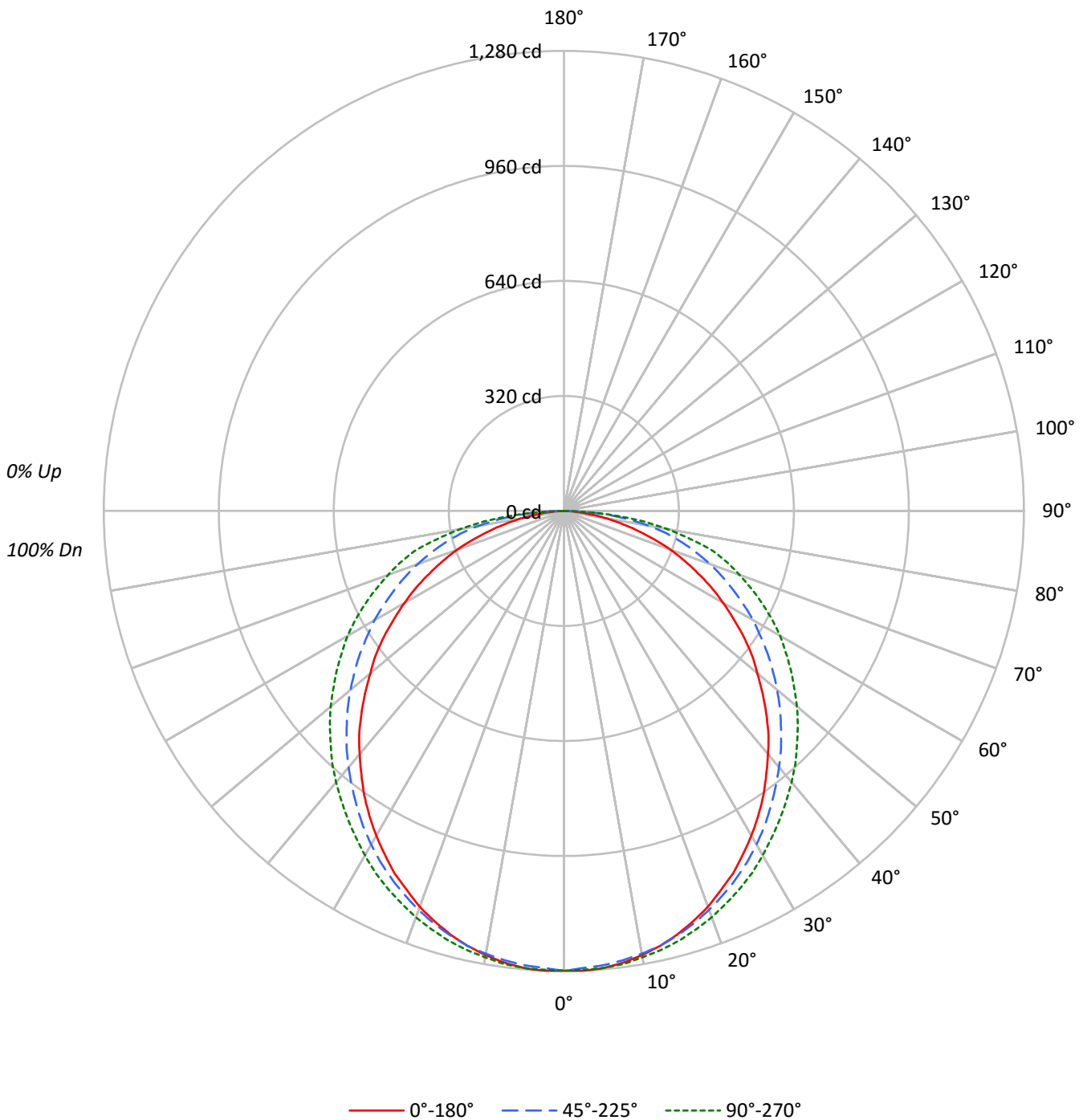
Input Watts (W): 31.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310687

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-CA125-W2A-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P310687

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-CA125-W2A-U-6500K

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°	1721	1721	1721
5°	1724	1713	1724
10°	1714	1709	1723
15°	1699	1703	1724
20°	1678	1691	1723
25°	1652	1679	1721
30°	1621	1665	1719
35°	1589	1648	1720
40°	1552	1636	1731
45°	1515	1626	1746
50°	1470	1621	1772
55°	1434	1624	1808
60°	1378	1638	1870
65°	1315	1655	1938
70°	1245	1706	2045
75°	1110	1779	2234
80°	947	1884	2283
85°	675	1866	2184



TEST NUMBER: P310687

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-CA125-W2A-U-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.0	3.1
10°-20°	346.1	8.9
20°-30°	522.7	13.5
30°-40°	630.0	16.2
40°-50°	661.4	17.1
50°-60°	618.8	16.0
60°-70°	511.0	13.2
70°-80°	348.2	9.0
80°-90°	118.8	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°	989.9	25.5
0°-40°	1619.9	41.8
0°-60°	2900.0	74.8
0°-90°	3878.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3878.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1279	1279	1279	1279	1279	
5°	1276	1275	1269	1276	1276	121
15°	1220	1221	1222	1235	1238	344
25°	1113	1118	1131	1153	1159	512
35°	968	978	1004	1037	1047	605
45°	796	813	854	901	917	614
55°	611	636	692	749	771	546
65°	413	448	520	585	609	410
75°	214	262	342	407	430	228
85°	44	86	121	136	142	55
90°	0	0	0	0	0	



TEST NUMBER: P310687

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-CA125-W2A-U-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1278.9	1278.9	1278.9	1278.9	1278.9
2.5°	1280.2	1278.9	1272.5	1278.9	1277.6
5°	1276.4	1275.1	1268.6	1276.4	1276.4
7.5°	1267.4	1267.4	1260.9	1269.9	1271.2
10°	1254.5	1254.5	1250.6	1260.9	1260.9
12.5°	1239.0	1239.0	1239.0	1249.3	1250.6
15°	1219.7	1221.0	1222.3	1235.2	1237.8
17.5°	1196.6	1199.2	1203.0	1218.5	1221.0
20°	1172.1	1174.7	1181.1	1199.2	1203.0
22.5°	1141.3	1147.7	1156.7	1177.3	1181.1
25°	1113.0	1118.1	1131.0	1152.8	1159.3
27.5°	1078.2	1085.9	1102.7	1125.8	1134.8
30°	1043.5	1051.2	1071.8	1098.8	1106.5
32.5°	1006.2	1017.7	1039.6	1067.9	1076.9
35°	967.6	977.9	1003.6	1037.0	1047.3
37.5°	925.1	939.3	967.6	1003.6	1016.5
40°	883.9	899.4	931.5	970.1	985.6
42.5°	842.8	858.2	894.2	938.0	953.4
45°	796.4	813.2	854.3	900.7	917.4
47.5°	750.1	770.7	815.7	864.6	882.6
50°	702.5	725.7	774.6	826.0	846.6
52.5°	660.1	681.9	733.4	788.7	808.0
55°	611.2	635.6	692.2	748.8	770.7
57.5°	561.0	588.0	648.5	710.2	732.1
60°	512.1	541.7	608.6	670.3	694.8
62.5°	464.5	494.1	563.6	627.9	652.3
65°	413.0	447.8	519.8	585.4	608.6
67.5°	364.1	401.4	477.3	541.7	564.8
70°	316.5	352.5	433.6	496.6	519.8
72.5°	265.1	306.2	387.3	452.9	477.3
75°	213.6	262.5	342.2	406.6	429.7
77.5°	166.0	216.2	295.9	348.7	360.3
80°	122.2	173.7	243.2	280.5	294.6
82.5°	78.5	130.0	185.3	212.3	223.9
85°	43.7	86.2	120.9	136.4	141.5
87.5°	18.0	37.3	48.9	55.3	55.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)