

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: P313172

Luminaire Tested: **24FCZ2-40-UNV-L83050-HRP-CA125-W2A-U-4000K**

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: P313172
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-L83050-HRP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3008.0 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

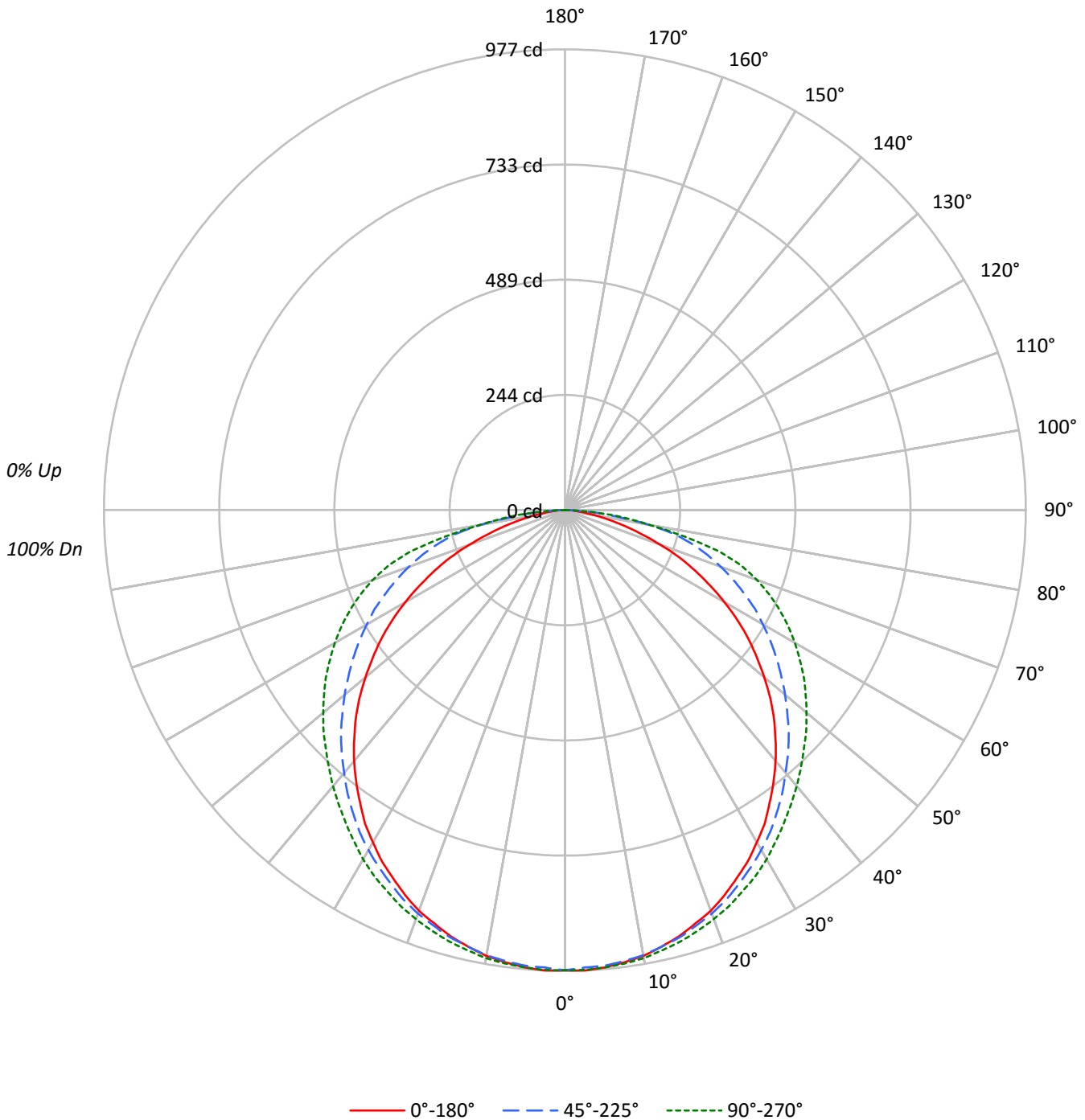
Input Watts (W): 33.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313172

CATALOG NUMBER: 24FCZ2-40-UNV-L83050-HRP-CA125-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P313172

CATALOG NUMBER: 24FCZ2-40-UNV-L83050-HRP-CA125-W2A-U-4000K

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	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	100	100	100	100	100		
	1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82	82	82	82	82	82		
	2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67	67	67	67	67	67		
	3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56	56	56	56	56	56		
	4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48	48	48	48	48	48		
	5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41	41	41	41	41	41		
	6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36	36	36	36	36	36		
	7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31	31	31	31	31	31		
	8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28	28	28	28	28	28		
	9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25	25	25	25	25	25		
	10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23	23	23	23	23	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1313	1313	1313
5°	1315	1310	1315
10°	1311	1309	1318
15°	1303	1307	1319
20°	1295	1304	1322
25°	1279	1297	1324
30°	1264	1293	1329
35°	1243	1287	1330
40°	1221	1278	1343
45°	1193	1277	1363
50°	1155	1276	1400
55°	1114	1285	1450
60°	1051	1305	1515
65°	970	1335	1600
70°	847	1382	1704
75°	687	1454	1761
80°	508	1425	1425
85°	389	1050	1186



TEST NUMBER: P313172

CATALOG NUMBER: 24FCZ2-40-UNV-L83050-HRP-CA125-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.5	3.1
10°-20°	265.5	8.8
20°-30°	404.2	13.4
30°-40°	490.8	16.3
40°-50°	518.5	17.2
50°-60°	489.3	16.3
60°-70°	406.8	13.5
70°-80°	267.6	8.9
80°-90°	73.0	2.4
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°	762.1	25.3
0°-40°	1252.9	41.7
0°-60°	2260.6	75.2
0°-90°	3008.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3008.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	976	976	976	976	976	
5°	973	973	970	973	973	92
15°	936	937	938	947	947	264
25°	861	866	874	889	892	397
35°	757	766	783	803	810	474
45°	627	640	671	704	716	483
55°	475	495	548	599	618	423
65°	305	340	419	481	502	301
75°	132	193	280	331	339	142
85°	25	55	68	76	77	31
90°	0	0	0	0	0	



TEST NUMBER: P313172

CATALOG NUMBER: 24FCZ2-40-UNV-L83050-HRP-CA125-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	975.9	975.9	975.9	975.9	975.9
2.5°	977.2	975.9	970.9	975.9	975.9
5°	973.4	973.4	969.7	973.4	973.4
7.5°	967.1	967.1	964.6	969.7	969.7
10°	959.6	959.6	958.3	964.6	964.6
12.5°	948.2	949.5	948.2	955.8	955.8
15°	935.7	936.9	938.2	947.0	947.0
17.5°	919.3	921.8	924.3	934.4	935.7
20°	904.2	905.4	910.5	921.8	923.1
22.5°	884.0	887.8	894.1	905.4	909.2
25°	861.4	866.4	873.9	889.1	891.6
27.5°	839.9	843.7	853.8	870.2	875.2
30°	813.5	819.8	832.4	848.8	855.1
32.5°	788.3	794.6	809.7	827.4	832.4
35°	756.8	765.6	783.3	803.4	809.7
37.5°	726.6	735.4	756.8	779.5	787.1
40°	695.1	705.2	727.9	754.3	764.4
42.5°	661.1	675.0	700.2	729.1	740.5
45°	627.1	639.7	671.2	703.9	716.5
47.5°	590.6	605.7	639.7	678.8	693.9
50°	551.6	570.5	609.5	652.3	668.7
52.5°	512.5	533.9	578.0	625.9	643.5
55°	474.8	494.9	547.8	599.4	618.3
57.5°	433.2	458.4	516.3	571.7	590.6
60°	390.4	418.1	484.8	542.8	562.9
62.5°	347.6	379.0	454.6	512.5	533.9
65°	304.7	340.0	419.3	481.0	502.5
67.5°	263.2	302.2	386.6	448.3	469.7
70°	215.3	264.5	351.3	411.8	433.2
72.5°	171.3	227.9	317.3	374.0	392.9
75°	132.2	192.7	279.6	331.2	338.7
77.5°	97.0	157.4	240.5	258.2	259.4
80°	65.5	125.9	183.9	181.3	183.9
82.5°	42.8	94.4	115.9	129.7	131.0
85°	25.2	55.4	68.0	75.6	76.8
87.5°	12.6	18.9	23.9	25.2	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)