

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: P313148

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-HRP-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: P313148
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: 24FCZ2-40HE-UNV-L83050-HRP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 3055.0 lumens
Efficiency: N/A
Efficacy: 95.8 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

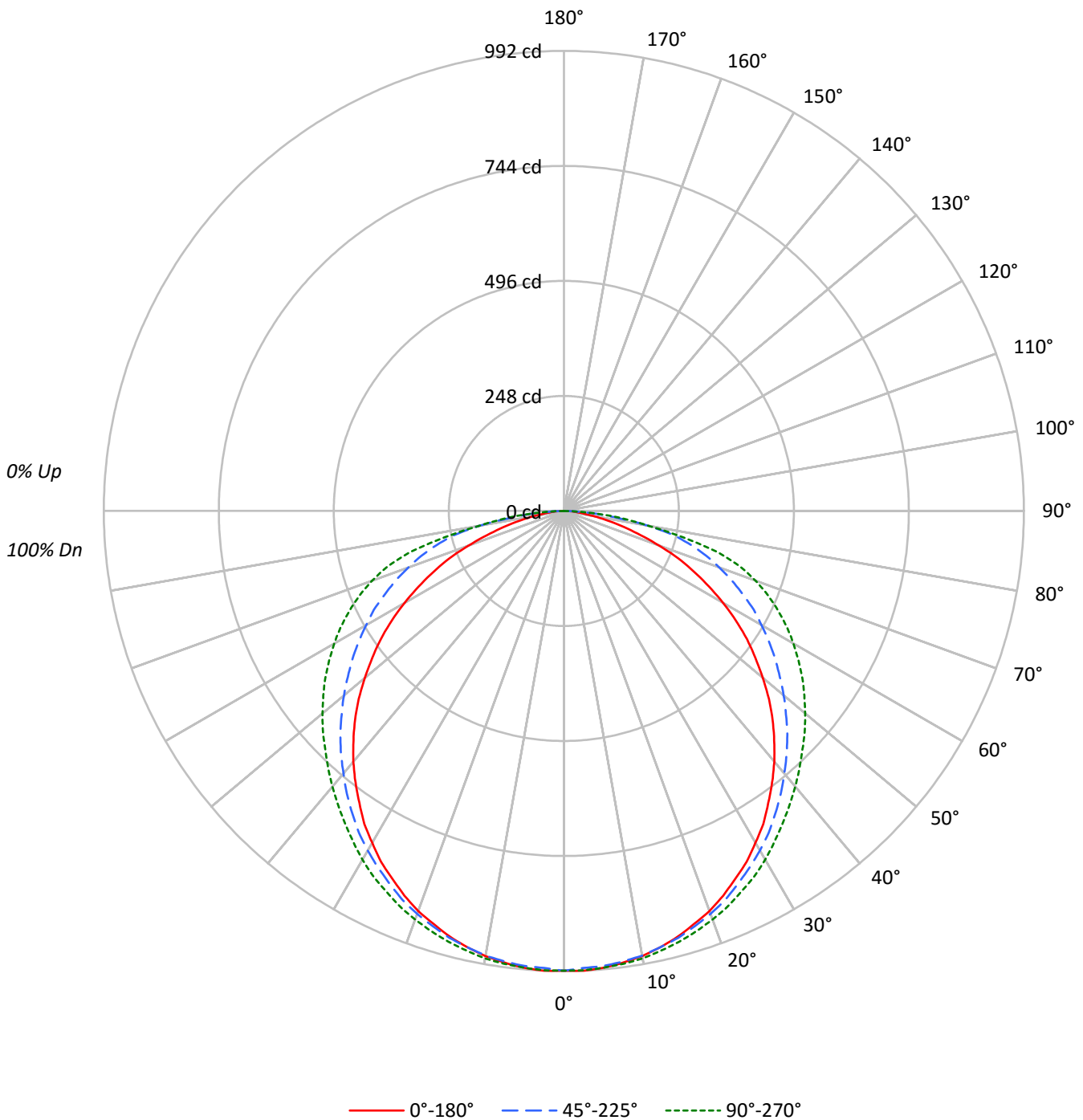
Input Watts (W): 31.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1334	1334	1334
5°	1335	1330	1335
10°	1332	1330	1339
15°	1324	1327	1340
20°	1315	1324	1342
25°	1299	1318	1344
30°	1284	1313	1349
35°	1263	1307	1351
40°	1240	1298	1364
45°	1212	1297	1385
50°	1173	1296	1421
55°	1131	1305	1473
60°	1067	1325	1538
65°	985	1356	1625
70°	860	1404	1731
75°	698	1476	1788
80°	515	1447	1447
85°	395	1067	1204



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.9	3.1
10°-20°	269.6	8.8
20°-30°	410.5	13.4
30°-40°	498.4	16.3
40°-50°	526.6	17.2
50°-60°	496.9	16.3
60°-70°	413.2	13.5
70°-80°	271.8	8.9
80°-90°	74.1	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°	774.0	25.3
0°-40°	1272.5	41.7
0°-60°	2295.9	75.2
0°-90°	3055.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3055.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	991	991	991	991	991	
5°	989	989	985	989	989	94
15°	950	952	953	962	962	268
25°	875	880	888	903	906	404
35°	769	778	796	816	822	481
45°	637	650	682	715	728	490
55°	482	503	556	609	628	429
65°	310	345	426	489	510	306
75°	134	196	284	336	344	145
85°	26	56	69	77	78	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	991.2	991.2	991.2	991.2	991.2
2.5°	992.5	991.2	986.1	991.2	991.2
5°	988.6	988.6	984.8	988.6	988.6
7.5°	982.2	982.2	979.7	984.8	984.8
10°	974.6	974.6	973.3	979.7	979.7
12.5°	963.1	964.3	963.1	970.7	970.7
15°	950.3	951.5	952.8	961.8	961.8
17.5°	933.6	936.2	938.8	949.0	950.3
20°	918.3	919.6	924.7	936.2	937.5
22.5°	897.8	901.7	908.1	919.6	923.4
25°	874.8	879.9	887.6	902.9	905.5
27.5°	853.1	856.9	867.1	883.8	888.9
30°	826.2	832.6	845.4	862.0	868.4
32.5°	800.6	807.0	822.4	840.3	845.4
35°	768.7	777.6	795.5	816.0	822.4
37.5°	738.0	746.9	768.7	791.7	799.4
40°	706.0	716.2	739.2	766.1	776.3
42.5°	671.5	685.5	711.1	740.5	752.0
45°	636.9	649.7	681.7	714.9	727.7
47.5°	599.8	615.2	649.7	689.4	704.7
50°	560.2	579.4	619.0	662.5	679.1
52.5°	520.5	542.3	587.0	635.6	653.6
55°	482.2	502.6	556.3	608.8	628.0
57.5°	440.0	465.5	524.4	580.6	599.8
60°	396.5	424.6	492.4	551.2	571.7
62.5°	353.0	385.0	461.7	520.5	542.3
65°	309.5	345.3	425.9	488.6	510.3
67.5°	267.3	307.0	392.6	455.3	477.1
70°	218.7	268.6	356.8	418.2	440.0
72.5°	173.9	231.5	322.3	379.9	399.0
75°	134.3	195.7	283.9	336.4	344.0
77.5°	98.5	159.9	244.3	262.2	263.5
80°	66.5	127.9	186.7	184.2	186.7
82.5°	43.5	95.9	117.7	131.7	133.0
85°	25.6	56.3	69.1	76.7	78.0
87.5°	12.8	19.2	24.3	25.6	28.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)