

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: P309377

Luminaire Tested: **24FCZ2-40-UNV-L82765-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: P309377
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-L82765-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: 2793.0 lumens
Efficiency: N/A
Efficacy: 84.4 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

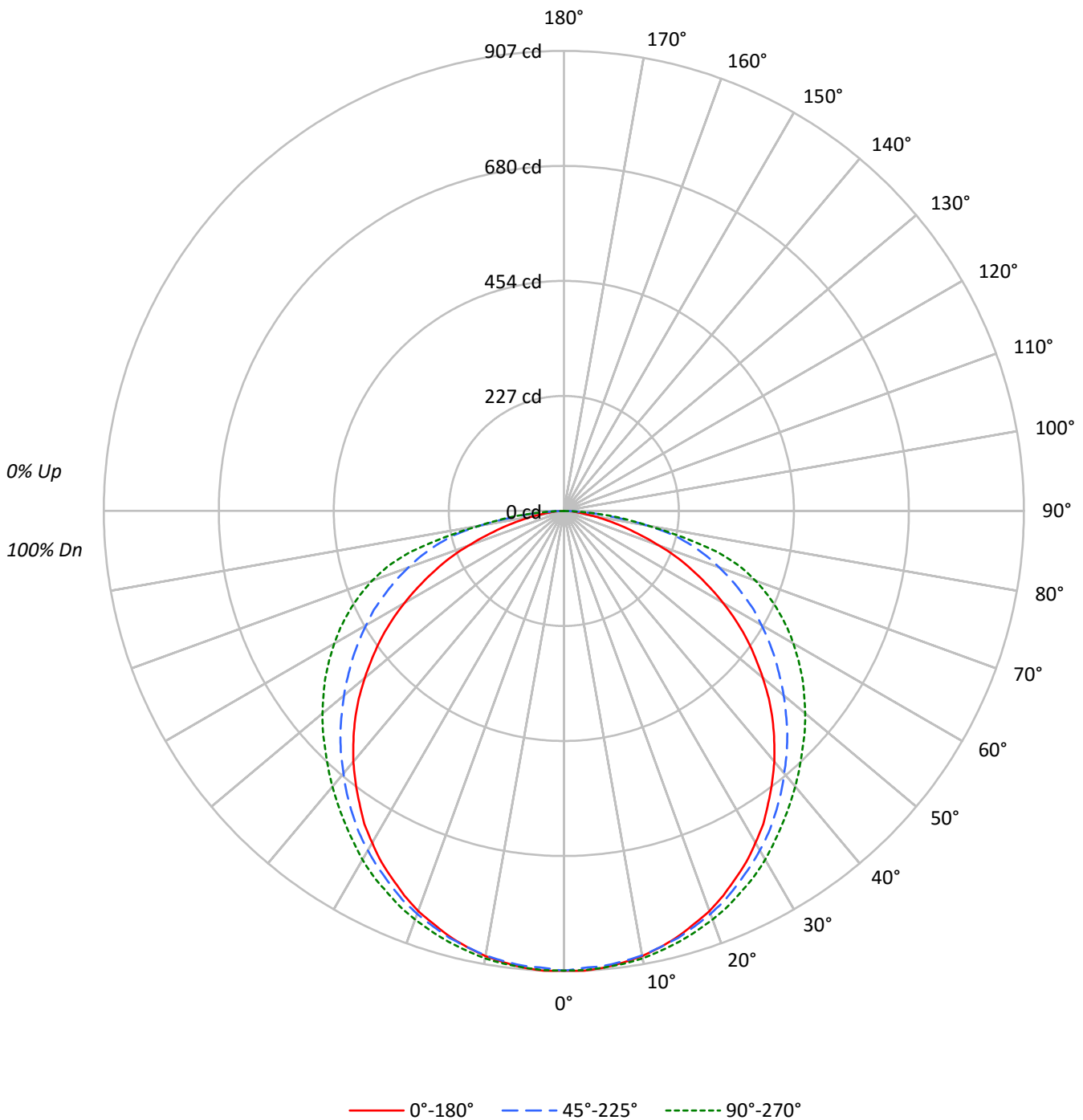
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1219	1219	1219
5°	1221	1216	1221
10°	1217	1216	1224
15°	1210	1213	1225
20°	1202	1210	1227
25°	1187	1205	1229
30°	1174	1201	1233
35°	1154	1195	1235
40°	1134	1187	1247
45°	1108	1186	1266
50°	1072	1185	1300
55°	1034	1193	1347
60°	975	1211	1407
65°	901	1240	1485
70°	786	1283	1582
75°	638	1350	1635
80°	471	1323	1323
85°	361	974	1101



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.8	3.1
10°-20°	246.5	8.8
20°-30°	375.3	13.4
30°-40°	455.7	16.3
40°-50°	481.4	17.2
50°-60°	454.3	16.3
60°-70°	377.7	13.5
70°-80°	248.5	8.9
80°-90°	67.7	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°	707.6	25.3
0°-40°	1163.3	41.7
0°-60°	2099.0	75.2
0°-90°	2793.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2793.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	904	904	900	904	904	86
15°	869	870	871	879	879	245
25°	800	804	812	826	828	369
35°	703	711	727	746	752	440
45°	582	594	623	654	665	448
55°	441	460	509	557	574	393
65°	283	316	389	447	466	280
75°	123	179	260	308	314	132
85°	23	51	63	70	71	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	906.2	906.2	906.2	906.2	906.2
2.5°	907.4	906.2	901.5	906.2	906.2
5°	903.9	903.9	900.3	903.9	903.9
7.5°	898.0	898.0	895.7	900.3	900.3
10°	891.0	891.0	889.8	895.7	895.7
12.5°	880.5	881.6	880.5	887.5	887.5
15°	868.8	869.9	871.1	879.3	879.3
17.5°	853.6	855.9	858.3	867.6	868.8
20°	839.5	840.7	845.4	855.9	857.1
22.5°	820.8	824.3	830.2	840.7	844.2
25°	799.8	804.5	811.5	825.5	827.8
27.5°	779.9	783.4	792.8	808.0	812.6
30°	755.4	761.2	772.9	788.1	793.9
32.5°	732.0	737.8	751.8	768.2	772.9
35°	702.7	710.9	727.3	746.0	751.8
37.5°	674.7	682.9	702.7	723.8	730.8
40°	645.4	654.8	675.8	700.4	709.8
42.5°	613.9	626.7	650.1	677.0	687.5
45°	582.3	594.0	623.2	653.6	665.3
47.5°	548.4	562.4	594.0	630.2	644.3
50°	512.1	529.7	565.9	605.7	620.9
52.5°	475.9	495.8	536.7	581.1	597.5
55°	440.8	459.5	508.6	556.6	574.1
57.5°	402.2	425.6	479.4	530.9	548.4
60°	362.5	388.2	450.2	504.0	522.7
62.5°	322.7	352.0	422.1	475.9	495.8
65°	283.0	315.7	389.4	446.7	466.5
67.5°	244.4	280.6	359.0	416.3	436.1
70°	199.9	245.5	326.2	382.4	402.2
72.5°	159.0	211.6	294.7	347.3	364.8
75°	122.8	178.9	259.6	307.5	314.5
77.5°	90.0	146.2	223.3	239.7	240.9
80°	60.8	116.9	170.7	168.4	170.7
82.5°	39.8	87.7	107.6	120.4	121.6
85°	23.4	51.4	63.1	70.2	71.3
87.5°	11.7	17.5	22.2	23.4	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)