

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: P309387

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-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: P309387
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-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 2786.0 lumens
Efficiency: N/A
Efficacy: 83.7 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

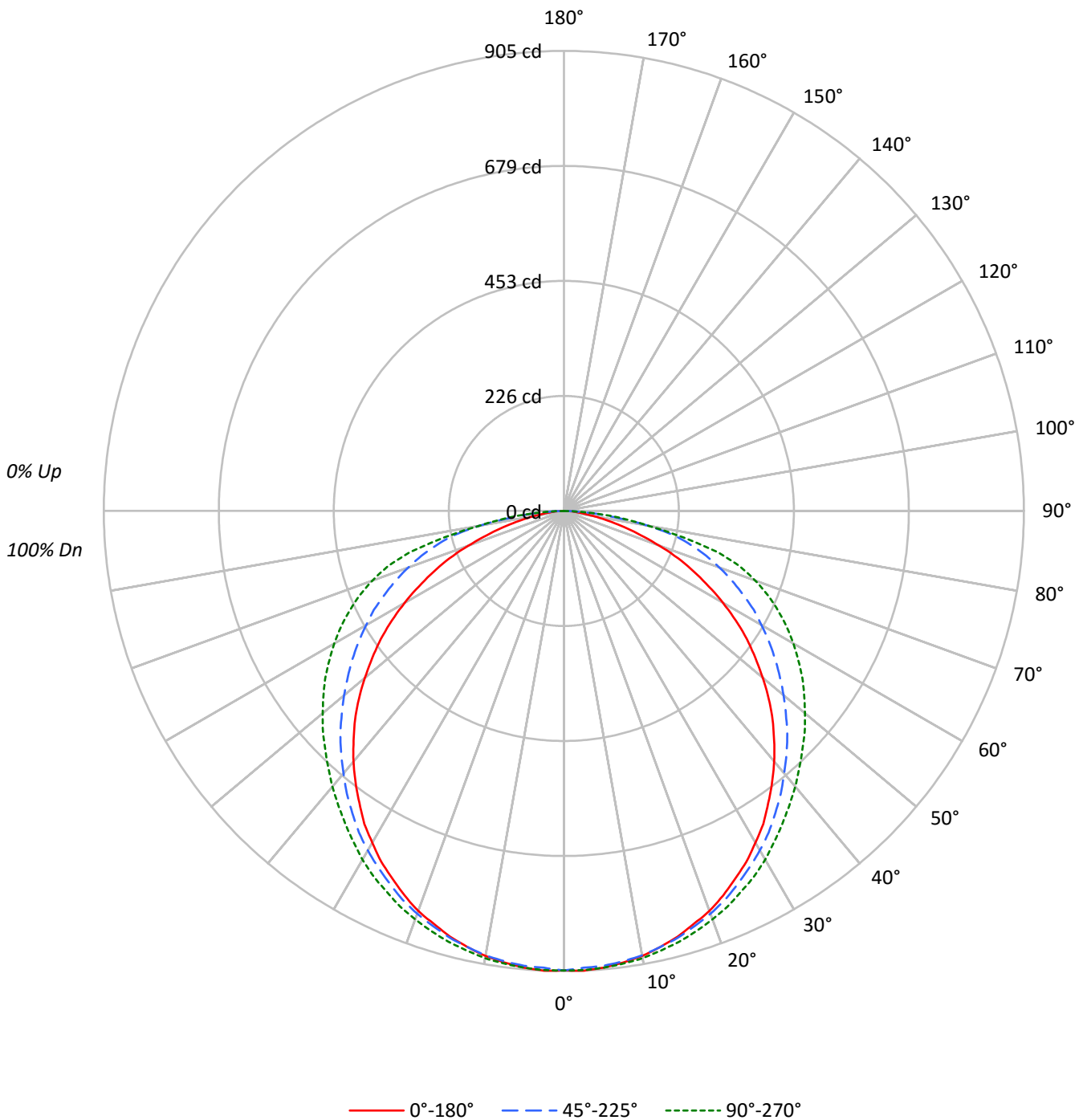
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1216	1216	1216
5°	1218	1213	1218
10°	1214	1213	1221
15°	1207	1210	1222
20°	1199	1207	1224
25°	1184	1202	1226
30°	1171	1198	1230
35°	1151	1192	1232
40°	1131	1184	1244
45°	1105	1183	1263
50°	1069	1182	1296
55°	1031	1190	1343
60°	973	1208	1403
65°	899	1237	1482
70°	784	1280	1578
75°	637	1346	1631
80°	470	1320	1320
85°	360	973	1098



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.6	3.1
10°-20°	245.9	8.8
20°-30°	374.3	13.4
30°-40°	454.5	16.3
40°-50°	480.2	17.2
50°-60°	453.2	16.3
60°-70°	376.8	13.5
70°-80°	247.9	8.9
80°-90°	67.6	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°	705.9	25.3
0°-40°	1160.4	41.7
0°-60°	2093.8	75.2
0°-90°	2786.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2786.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	904	904	904	904	904	
5°	902	902	898	902	902	86
15°	867	868	869	877	877	244
25°	798	802	809	823	826	368
35°	701	709	726	744	750	439
45°	581	592	622	652	664	447
55°	440	458	507	555	573	392
65°	282	315	388	446	465	279
75°	122	178	259	307	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°	903.9	903.9	903.9	903.9	903.9
2.5°	905.1	903.9	899.3	903.9	903.9
5°	901.6	901.6	898.1	901.6	901.6
7.5°	895.8	895.8	893.4	898.1	898.1
10°	888.8	888.8	887.6	893.4	893.4
12.5°	878.3	879.4	878.3	885.3	885.3
15°	866.6	867.8	868.9	877.1	877.1
17.5°	851.4	853.8	856.1	865.4	866.6
20°	837.4	838.6	843.3	853.8	854.9
22.5°	818.8	822.3	828.1	838.6	842.1
25°	797.8	802.4	809.4	823.4	825.8
27.5°	778.0	781.5	790.8	805.9	810.6
30°	753.5	759.3	771.0	786.1	792.0
32.5°	730.1	736.0	750.0	766.3	771.0
35°	701.0	709.1	725.5	744.1	750.0
37.5°	673.0	681.1	701.0	722.0	729.0
40°	643.8	653.2	674.1	698.6	708.0
42.5°	612.3	625.2	648.5	675.3	685.8
45°	580.8	592.5	621.7	652.0	663.7
47.5°	547.0	561.0	592.5	628.7	642.7
50°	510.9	528.4	564.5	604.2	619.3
52.5°	474.7	494.5	535.4	579.7	596.0
55°	439.7	458.4	507.4	555.2	572.7
57.5°	401.2	424.6	478.2	529.5	547.0
60°	361.6	387.2	449.0	502.7	521.4
62.5°	321.9	351.1	421.1	474.7	494.5
65°	282.3	314.9	388.4	445.5	465.4
67.5°	243.8	279.9	358.1	415.2	435.0
70°	199.4	244.9	325.4	381.4	401.2
72.5°	158.6	211.1	293.9	346.4	363.9
75°	122.5	178.5	258.9	306.7	313.7
77.5°	89.8	145.8	222.8	239.1	240.3
80°	60.7	116.6	170.3	168.0	170.3
82.5°	39.7	87.5	107.3	120.1	121.3
85°	23.3	51.3	63.0	70.0	71.1
87.5°	11.7	17.5	22.2	23.3	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)