

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: P309479

Luminaire Tested: **24FCZ2-45-UNV-L82765-HRP-CP125-W2A-U-5500K**

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: P309479
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: 24FCZ2-45-UNV-L82765-HRP-CP125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (168) 5500K 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: 3194.0 lumens
Efficiency: N/A
Efficacy: 82.5 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

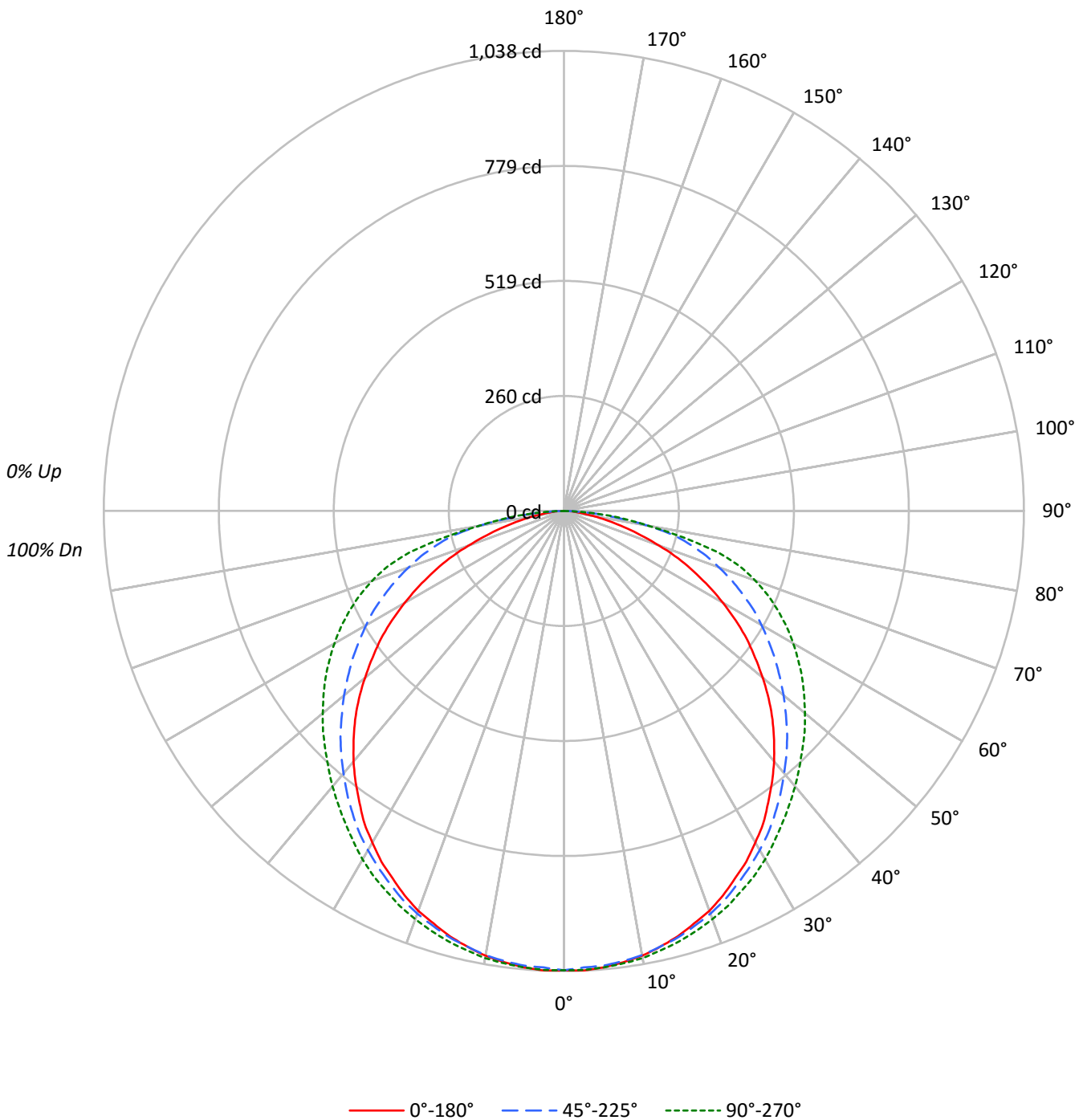
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1394	1394	1394
5°	1396	1391	1396
10°	1392	1390	1399
15°	1384	1388	1401
20°	1375	1384	1403
25°	1358	1378	1405
30°	1342	1373	1411
35°	1320	1366	1412
40°	1296	1358	1426
45°	1267	1356	1448
50°	1226	1355	1486
55°	1183	1365	1540
60°	1115	1385	1608
65°	1030	1418	1699
70°	900	1468	1810
75°	730	1543	1870
80°	539	1512	1512
85°	412	1115	1260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.2	3.1
10°-20°	281.9	8.8
20°-30°	429.2	13.4
30°-40°	521.1	16.3
40°-50°	550.6	17.2
50°-60°	519.5	16.3
60°-70°	431.9	13.5
70°-80°	284.2	8.9
80°-90°	77.5	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°	809.2	25.3
0°-40°	1330.4	41.7
0°-60°	2400.4	75.2
0°-90°	3194.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3194.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1036	1036	1036	1036	1036	
5°	1034	1034	1030	1034	1034	98
15°	994	995	996	1006	1006	280
25°	915	920	928	944	947	422
35°	804	813	832	853	860	503
45°	666	679	713	748	761	513
55°	504	526	582	636	656	449
65°	324	361	445	511	534	320
75°	140	205	297	352	360	151
85°	27	59	72	80	82	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1036.3	1036.3	1036.3	1036.3	1036.3
2.5°	1037.6	1036.3	1030.9	1036.3	1036.3
5°	1033.6	1033.6	1029.6	1033.6	1033.6
7.5°	1026.9	1026.9	1024.3	1029.6	1029.6
10°	1018.9	1018.9	1017.6	1024.3	1024.3
12.5°	1006.9	1008.2	1006.9	1014.9	1014.9
15°	993.5	994.8	996.2	1005.5	1005.5
17.5°	976.1	978.8	981.5	992.2	993.5
20°	960.1	961.4	966.8	978.8	980.1
22.5°	938.7	942.7	949.4	961.4	965.4
25°	914.6	920.0	928.0	944.0	946.7
27.5°	891.9	895.9	906.6	924.0	929.3
30°	863.8	870.5	883.9	901.2	907.9
32.5°	837.1	843.7	859.8	878.5	883.9
35°	803.6	813.0	831.7	853.1	859.8
37.5°	771.5	780.9	803.6	827.7	835.7
40°	738.1	748.8	772.9	801.0	811.7
42.5°	702.0	716.7	743.5	774.2	786.2
45°	665.9	679.3	712.7	747.5	760.8
47.5°	627.1	643.2	679.3	720.7	736.8
50°	585.7	605.7	647.2	692.6	710.0
52.5°	544.2	567.0	613.8	664.6	683.3
55°	504.1	525.5	581.7	636.5	656.5
57.5°	460.0	486.7	548.2	607.1	627.1
60°	414.5	443.9	514.8	576.3	597.7
62.5°	369.1	402.5	482.7	544.2	567.0
65°	323.6	361.0	445.3	510.8	533.5
67.5°	279.5	320.9	410.5	476.0	498.8
70°	228.7	280.8	373.1	437.2	460.0
72.5°	181.9	242.0	337.0	397.1	417.2
75°	140.4	204.6	296.8	351.7	359.7
77.5°	103.0	167.1	255.4	274.1	275.5
80°	69.5	133.7	195.2	192.6	195.2
82.5°	45.5	100.3	123.0	137.7	139.1
85°	26.7	58.8	72.2	80.2	81.6
87.5°	13.4	20.1	25.4	26.7	29.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)