

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: P309477

Luminaire Tested: **24FCZ2-45-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: P309477
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-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: 3120.0 lumens
Efficiency: N/A
Efficacy: 81.5 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

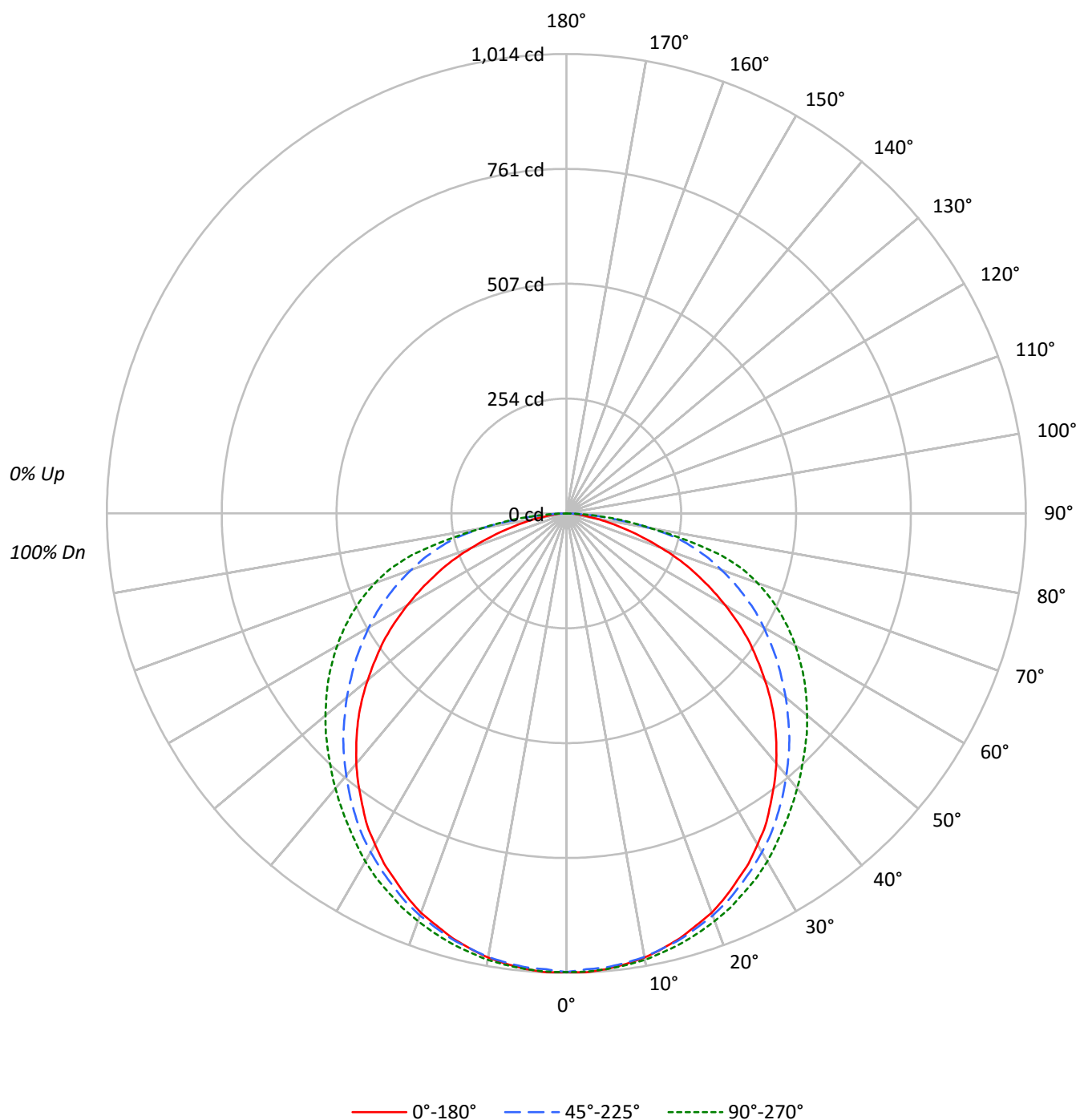
Input Watts (W): 38.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1362	1362	1362
5°	1364	1358	1364
10°	1360	1358	1367
15°	1352	1355	1368
20°	1343	1352	1371
25°	1326	1346	1373
30°	1311	1341	1378
35°	1289	1334	1380
40°	1266	1326	1392
45°	1238	1325	1414
50°	1198	1323	1452
55°	1155	1333	1504
60°	1090	1353	1571
65°	1006	1385	1659
70°	879	1434	1768
75°	713	1508	1827
80°	526	1478	1478
85°	403	1088	1230



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.9	3.1
10°-20°	275.4	8.8
20°-30°	419.2	13.4
30°-40°	509.0	16.3
40°-50°	537.8	17.2
50°-60°	507.5	16.3
60°-70°	422.0	13.5
70°-80°	277.6	8.9
80°-90°	75.7	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°	790.5	25.3
0°-40°	1299.5	41.7
0°-60°	2344.8	75.2
0°-90°	3120.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3120.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1012	1012	1012	1012	1012	
5°	1010	1010	1006	1010	1010	96
15°	970	972	973	982	982	274
25°	893	899	906	922	925	412
35°	785	794	812	833	840	491
45°	650	664	696	730	743	501
55°	492	513	568	622	641	439
65°	316	353	435	499	521	312
75°	137	200	290	344	351	148
85°	26	58	70	78	80	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1012.3	1012.3	1012.3	1012.3	1012.3
2.5°	1013.6	1012.3	1007.1	1012.3	1012.3
5°	1009.7	1009.7	1005.8	1009.7	1009.7
7.5°	1003.1	1003.1	1000.5	1005.8	1005.8
10°	995.3	995.3	994.0	1000.5	1000.5
12.5°	983.6	984.9	983.6	991.4	991.4
15°	970.5	971.8	973.1	982.2	982.2
17.5°	953.5	956.1	958.7	969.2	970.5
20°	937.8	939.1	944.4	956.1	957.4
22.5°	916.9	920.9	927.4	939.1	943.1
25°	893.4	898.6	906.5	922.2	924.8
27.5°	871.2	875.1	885.6	902.6	907.8
30°	843.8	850.3	863.4	880.4	886.9
32.5°	817.7	824.2	839.9	858.2	863.4
35°	785.0	794.2	812.4	833.3	839.9
37.5°	753.7	762.8	785.0	808.5	816.4
40°	721.0	731.5	755.0	782.4	792.8
42.5°	685.7	700.1	726.2	756.3	768.0
45°	650.5	663.5	696.2	730.2	743.2
47.5°	612.6	628.3	663.5	704.0	719.7
50°	572.1	591.7	632.2	676.6	693.6
52.5°	531.6	553.8	599.5	649.2	667.5
55°	492.4	513.3	568.2	621.7	641.3
57.5°	449.3	475.4	535.5	593.0	612.6
60°	404.9	433.7	502.9	563.0	583.9
62.5°	360.5	393.2	471.5	531.6	553.8
65°	316.1	352.7	435.0	499.0	521.2
67.5°	273.0	313.5	401.0	465.0	487.2
70°	223.4	274.3	364.4	427.1	449.3
72.5°	177.6	236.4	329.2	387.9	407.5
75°	137.1	199.8	290.0	343.5	351.4
77.5°	100.6	163.3	249.5	267.8	269.1
80°	67.9	130.6	190.7	188.1	190.7
82.5°	44.4	98.0	120.2	134.5	135.8
85°	26.1	57.5	70.5	78.4	79.7
87.5°	13.1	19.6	24.8	26.1	28.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)