

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: P309467

Luminaire Tested: **24FCZ2-45-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: P309467
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-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: 3126.0 lumens
Efficiency: N/A
Efficacy: 82.3 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

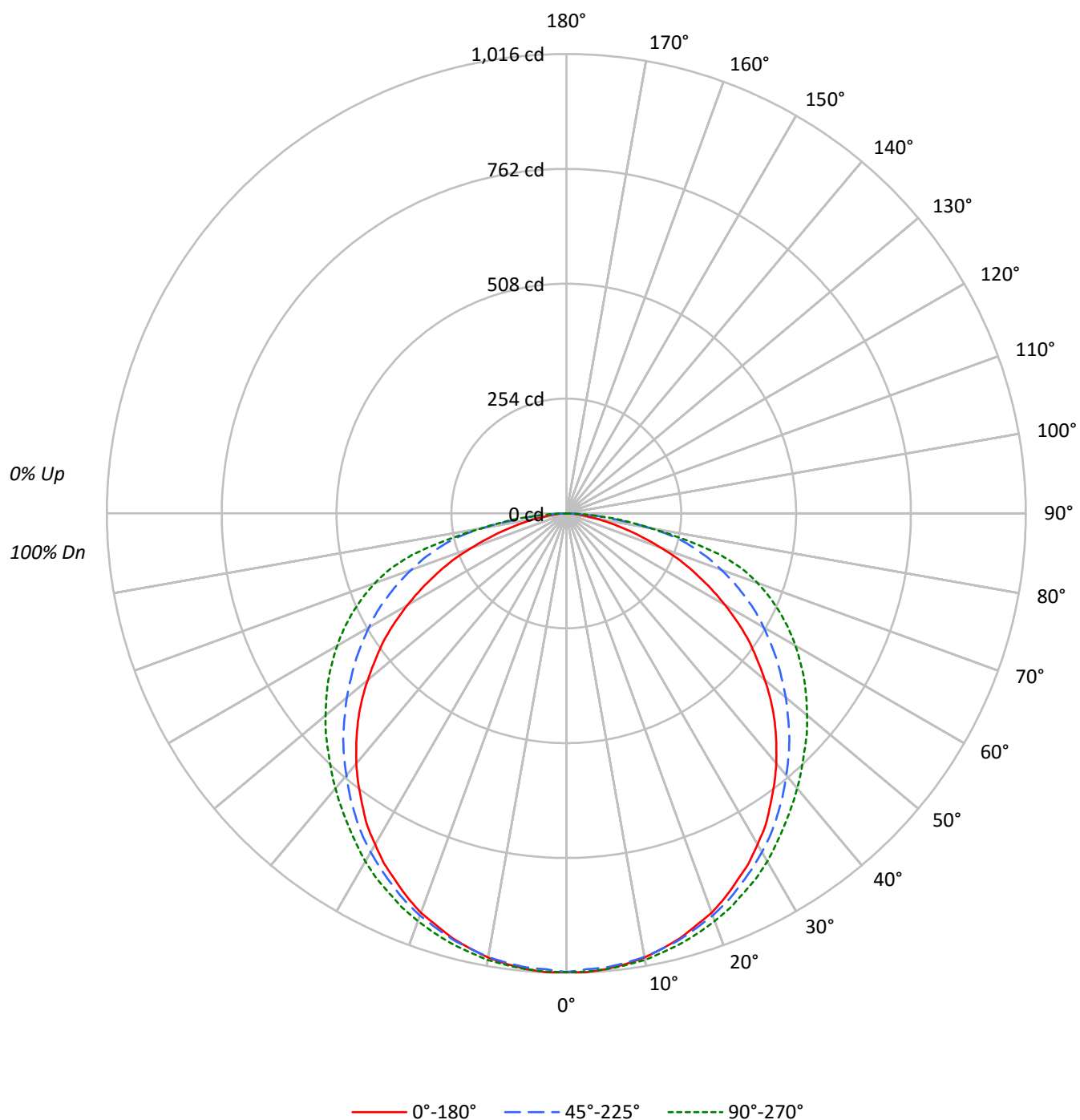
Input Watts (W): 38
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1365	1365	1365
5°	1366	1361	1366
10°	1362	1361	1370
15°	1355	1358	1371
20°	1345	1355	1374
25°	1329	1348	1376
30°	1313	1344	1381
35°	1292	1337	1382
40°	1269	1329	1395
45°	1240	1327	1417
50°	1200	1326	1455
55°	1157	1335	1507
60°	1092	1356	1574
65°	1008	1387	1663
70°	880	1436	1771
75°	714	1510	1830
80°	528	1481	1481
85°	404	1091	1232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.1	3.1
10°-20°	275.9	8.8
20°-30°	420.0	13.4
30°-40°	510.0	16.3
40°-50°	538.8	17.2
50°-60°	508.4	16.3
60°-70°	422.7	13.5
70°-80°	278.1	8.9
80°-90°	75.8	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°	792.0	25.3
0°-40°	1302.0	41.7
0°-60°	2349.3	75.2
0°-90°	3126.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3126.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1014	1014	1014	1014	1014	
5°	1012	1012	1008	1012	1012	96
15°	972	974	975	984	984	274
25°	895	900	908	924	927	413
35°	786	796	814	835	842	492
45°	652	665	698	732	745	502
55°	493	514	569	623	643	439
65°	317	353	436	500	522	313
75°	137	200	290	344	352	148
85°	26	58	71	78	80	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1014.2	1014.2	1014.2	1014.2	1014.2
2.5°	1015.5	1014.2	1009.0	1014.2	1014.2
5°	1011.6	1011.6	1007.7	1011.6	1011.6
7.5°	1005.1	1005.1	1002.5	1007.7	1007.7
10°	997.2	997.2	995.9	1002.5	1002.5
12.5°	985.4	986.8	985.4	993.3	993.3
15°	972.4	973.7	975.0	984.1	984.1
17.5°	955.3	958.0	960.6	971.0	972.4
20°	939.6	940.9	946.2	958.0	959.3
22.5°	918.7	922.6	929.2	940.9	944.9
25°	895.1	900.4	908.2	923.9	926.6
27.5°	872.9	876.8	887.3	904.3	909.5
30°	845.4	852.0	865.0	882.1	888.6
32.5°	819.2	825.8	841.5	859.8	865.0
35°	786.5	795.7	814.0	834.9	841.5
37.5°	755.1	764.3	786.5	810.1	817.9
40°	722.4	732.9	756.4	783.9	794.4
42.5°	687.1	701.5	727.6	757.7	769.5
45°	651.7	664.8	697.5	731.6	744.6
47.5°	613.8	629.5	664.8	705.4	721.1
50°	573.2	592.8	633.4	677.9	694.9
52.5°	532.6	554.9	600.7	650.4	668.7
55°	493.4	514.3	569.3	622.9	642.6
57.5°	450.2	476.4	536.6	594.1	613.8
60°	405.7	434.5	503.8	564.0	585.0
62.5°	361.2	393.9	472.4	532.6	554.9
65°	316.7	353.3	435.8	499.9	522.2
67.5°	273.5	314.1	401.8	465.9	488.1
70°	223.8	274.8	365.1	427.9	450.2
72.5°	178.0	236.9	329.8	388.7	408.3
75°	137.4	200.2	290.5	344.2	352.0
77.5°	100.8	163.6	250.0	268.3	269.6
80°	68.1	130.9	191.1	188.5	191.1
82.5°	44.5	98.2	120.4	134.8	136.1
85°	26.2	57.6	70.7	78.5	79.8
87.5°	13.1	19.6	24.9	26.2	28.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)