

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: P310601

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CP125-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: P310601
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35HE-UNV-L82765-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 3138.0 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

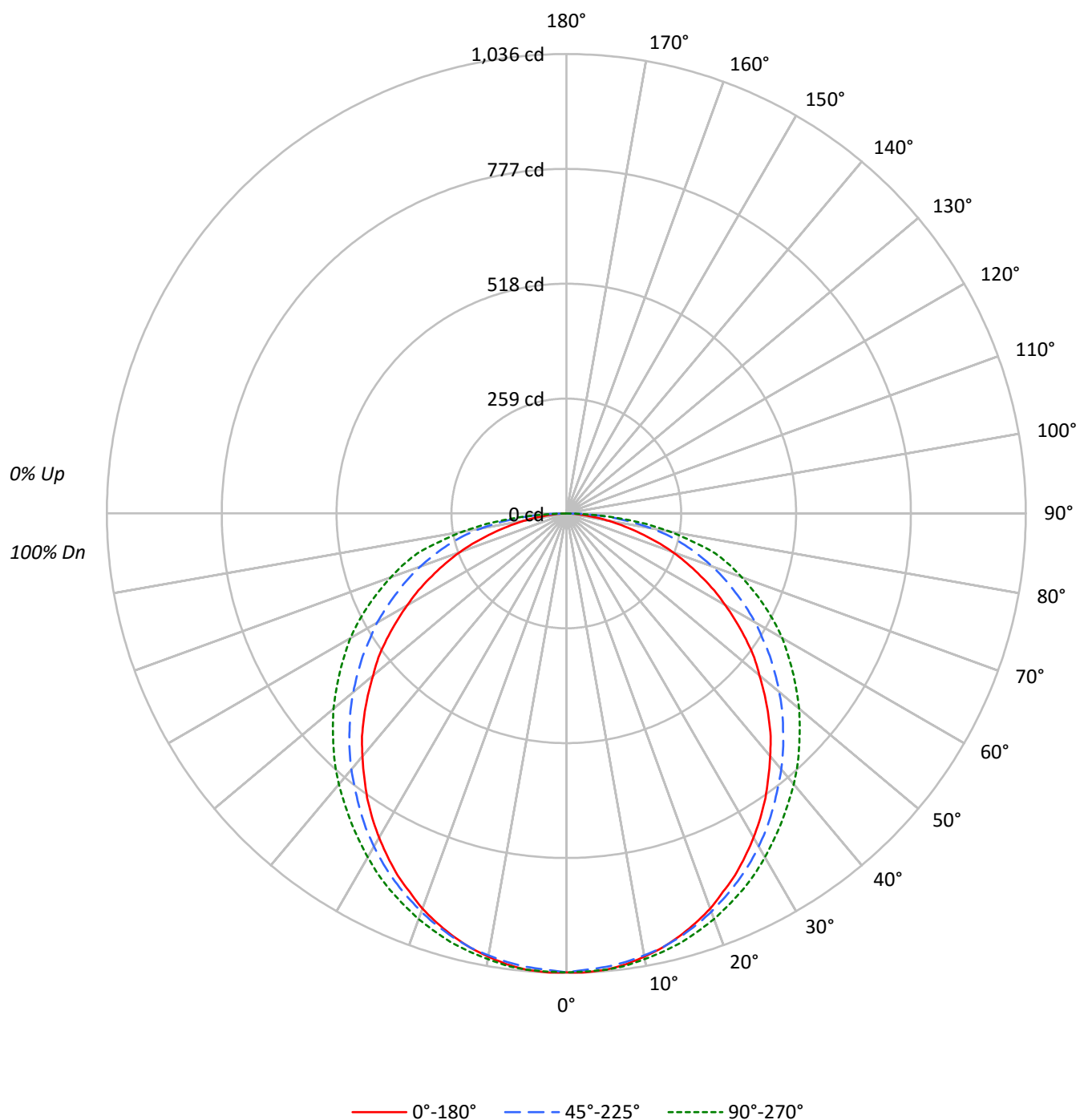
Input Watts (W): 26.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	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	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1392	1392	1392
5°	1395	1387	1395
10°	1387	1383	1394
15°	1375	1378	1395
20°	1358	1369	1394
25°	1337	1359	1393
30°	1312	1347	1391
35°	1286	1334	1392
40°	1256	1324	1401
45°	1226	1315	1412
50°	1190	1312	1434
55°	1160	1314	1463
60°	1115	1325	1513
65°	1064	1339	1568
70°	1007	1380	1655
75°	898	1439	1808
80°	766	1525	1847
85°	546	1511	1768



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.9	3.1
10°-20°	280.0	8.9
20°-30°	423.0	13.5
30°-40°	509.8	16.2
40°-50°	535.2	17.1
50°-60°	500.7	16.0
60°-70°	413.5	13.2
70°-80°	281.8	9.0
80°-90°	96.1	3.1
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°	801.0	25.5
0°-40°	1310.8	41.8
0°-60°	2346.7	74.8
0°-90°	3138.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3138.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1035	1035	1035	1035	1035	
5°	1033	1032	1027	1033	1033	98
15°	987	988	989	1000	1002	278
25°	901	905	915	933	938	414
35°	783	791	812	839	848	489
45°	644	658	691	729	742	497
55°	494	514	560	606	624	441
65°	334	362	421	474	492	331
75°	173	212	277	329	348	184
85°	35	70	98	110	114	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1034.9	1034.9	1034.9	1034.9	1034.9
2.5°	1035.9	1034.9	1029.7	1034.9	1033.8
5°	1032.8	1031.8	1026.6	1032.8	1032.8
7.5°	1025.5	1025.5	1020.3	1027.6	1028.6
10°	1015.1	1015.1	1012.0	1020.3	1020.3
12.5°	1002.6	1002.6	1002.6	1010.9	1012.0
15°	987.0	988.0	989.1	999.5	1001.6
17.5°	968.3	970.3	973.5	986.0	988.0
20°	948.5	950.6	955.8	970.3	973.5
22.5°	923.5	928.7	936.0	952.6	955.8
25°	900.6	904.7	915.2	932.9	938.1
27.5°	872.5	878.7	892.3	911.0	918.3
30°	844.4	850.6	867.3	889.1	895.4
32.5°	814.2	823.5	841.2	864.1	871.4
35°	782.9	791.3	812.1	839.2	847.5
37.5°	748.6	760.0	782.9	812.1	822.5
40°	715.3	727.8	753.8	785.0	797.5
42.5°	681.9	694.4	723.6	759.0	771.5
45°	644.5	658.0	691.3	728.8	742.3
47.5°	607.0	623.6	660.1	699.6	714.2
50°	568.5	587.2	626.8	668.4	685.1
52.5°	534.1	551.8	593.4	638.2	653.8
55°	494.5	514.3	560.1	605.9	623.6
57.5°	453.9	475.8	524.7	574.7	592.4
60°	414.4	438.3	492.5	542.4	562.2
62.5°	375.8	399.8	456.0	508.1	527.9
65°	334.2	362.3	420.6	473.7	492.5
67.5°	294.6	324.8	386.3	438.3	457.1
70°	256.1	285.3	350.9	401.9	420.6
72.5°	214.5	247.8	313.4	366.5	386.3
75°	172.8	212.4	276.9	329.0	347.7
77.5°	134.3	174.9	239.5	282.1	291.5
80°	98.9	140.6	196.8	227.0	238.4
82.5°	63.5	105.2	149.9	171.8	181.2
85°	35.4	69.8	97.9	110.4	114.5
87.5°	14.6	30.2	39.6	44.8	44.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)