

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: P310614

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CP187-W2A-U-5700K**

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: P310614
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-CP187-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 5700K 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: 3139.0 lumens
Efficiency: N/A
Efficacy: 117.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

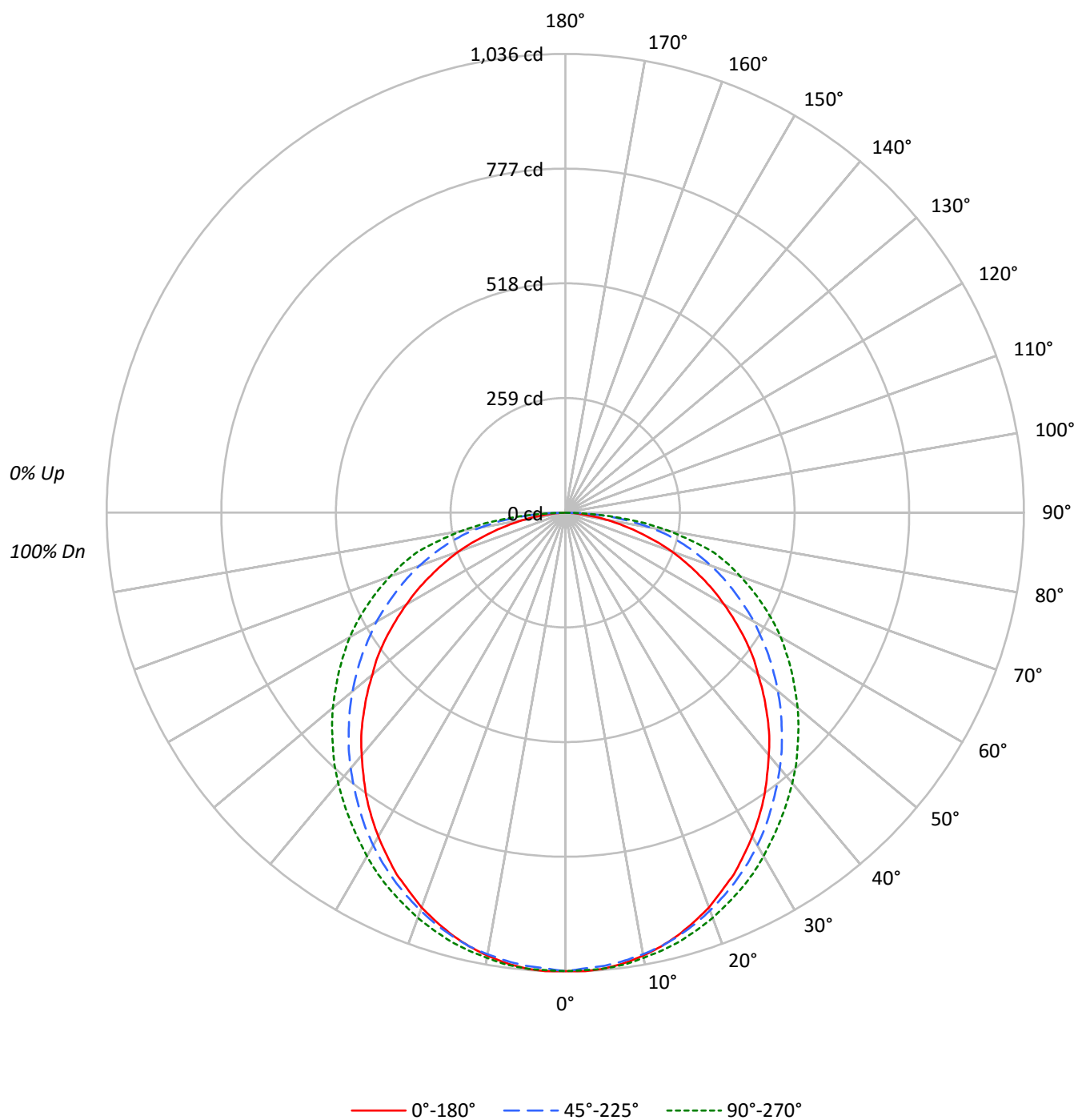
Input Watts (W): 26.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	108	103	98	94	105	100	96	92		96	92	89		92	89	87		88	86	84
2	98	89	81	75	95	87	80	74		83	78	73		80	75	71		77	73	69
3	89	77	69	62	86	76	68	61		73	66	60		70	64	59		67	62	58
4	81	68	59	52	79	67	58	52		64	57	51		62	56	50		60	54	50
5	74	61	52	45	72	60	51	44		58	50	44		56	49	43		54	48	43
6	69	55	46	39	67	54	45	39		52	44	38		50	43	38		49	42	38
7	64	50	41	34	62	49	40	34		47	39	34		46	39	34		44	38	33
8	59	45	37	31	57	45	36	30		43	36	30		42	35	30		41	34	30
9	55	41	33	27	54	41	33	27		40	32	27		39	32	27		38	31	27
10	52	38	30	25	50	38	30	25		37	30	25		36	29	25		35	29	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1393	1393	1393
5°	1395	1387	1395
10°	1387	1383	1394
15°	1375	1378	1396
20°	1359	1369	1394
25°	1337	1359	1393
30°	1312	1348	1392
35°	1286	1334	1393
40°	1257	1324	1401
45°	1227	1316	1413
50°	1190	1312	1434
55°	1160	1314	1463
60°	1115	1326	1513
65°	1064	1340	1568
70°	1008	1381	1655
75°	899	1440	1808
80°	766	1525	1848
85°	546	1511	1769



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.0	3.1
10°-20°	280.1	8.9
20°-30°	423.1	13.5
30°-40°	510.0	16.2
40°-50°	535.4	17.1
50°-60°	500.9	16.0
60°-70°	413.6	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°	801.2	25.5
0°-40°	1311.2	41.8
0°-60°	2347.4	74.8
0°-90°	3139.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3139.0	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	792	812	839	848	489
45°	645	658	692	729	743	497
55°	495	514	560	606	624	442
65°	334	362	421	474	493	332
75°	173	212	277	329	348	184
85°	35	70	98	110	115	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1035.2	1035.2	1035.2	1035.2	1035.2
2.5°	1036.3	1035.2	1030.0	1035.2	1034.2
5°	1033.1	1032.1	1026.9	1033.1	1033.1
7.5°	1025.8	1025.8	1020.6	1027.9	1029.0
10°	1015.4	1015.4	1012.3	1020.6	1020.6
12.5°	1002.9	1002.9	1002.9	1011.3	1012.3
15°	987.3	988.3	989.4	999.8	1001.9
17.5°	968.6	970.6	973.8	986.3	988.3
20°	948.8	950.9	956.1	970.6	973.8
22.5°	923.8	929.0	936.3	952.9	956.1
25°	900.9	905.0	915.4	933.2	938.4
27.5°	872.7	879.0	892.5	911.3	918.6
30°	844.6	850.9	867.5	889.4	895.7
32.5°	814.4	823.8	841.5	864.4	871.7
35°	783.2	791.5	812.3	839.4	847.8
37.5°	748.8	760.3	783.2	812.3	822.8
40°	715.5	728.0	754.0	785.3	797.8
42.5°	682.2	694.7	723.8	759.2	771.7
45°	644.7	658.2	691.5	729.0	742.6
47.5°	607.2	623.8	660.3	699.9	714.4
50°	568.6	587.4	627.0	668.6	685.3
52.5°	534.3	552.0	593.6	638.4	654.0
55°	494.7	514.5	560.3	606.1	623.8
57.5°	454.1	475.9	524.9	574.9	592.6
60°	414.5	438.5	492.6	542.6	562.4
62.5°	376.0	399.9	456.2	508.2	528.0
65°	334.3	362.4	420.8	473.9	492.6
67.5°	294.7	324.9	386.4	438.5	457.2
70°	256.2	285.4	351.0	402.0	420.8
72.5°	214.5	247.9	313.5	366.6	386.4
75°	172.9	212.5	277.0	329.1	347.8
77.5°	134.3	175.0	239.5	282.2	291.6
80°	98.9	140.6	196.8	227.0	238.5
82.5°	63.5	105.2	150.0	171.8	181.2
85°	35.4	69.8	97.9	110.4	114.6
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)