

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: P311283

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-CP187-W2A-U-3000K**

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: P311283
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (336) 3000K 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: 2986.0 lumens
Efficiency: N/A
Efficacy: 115.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

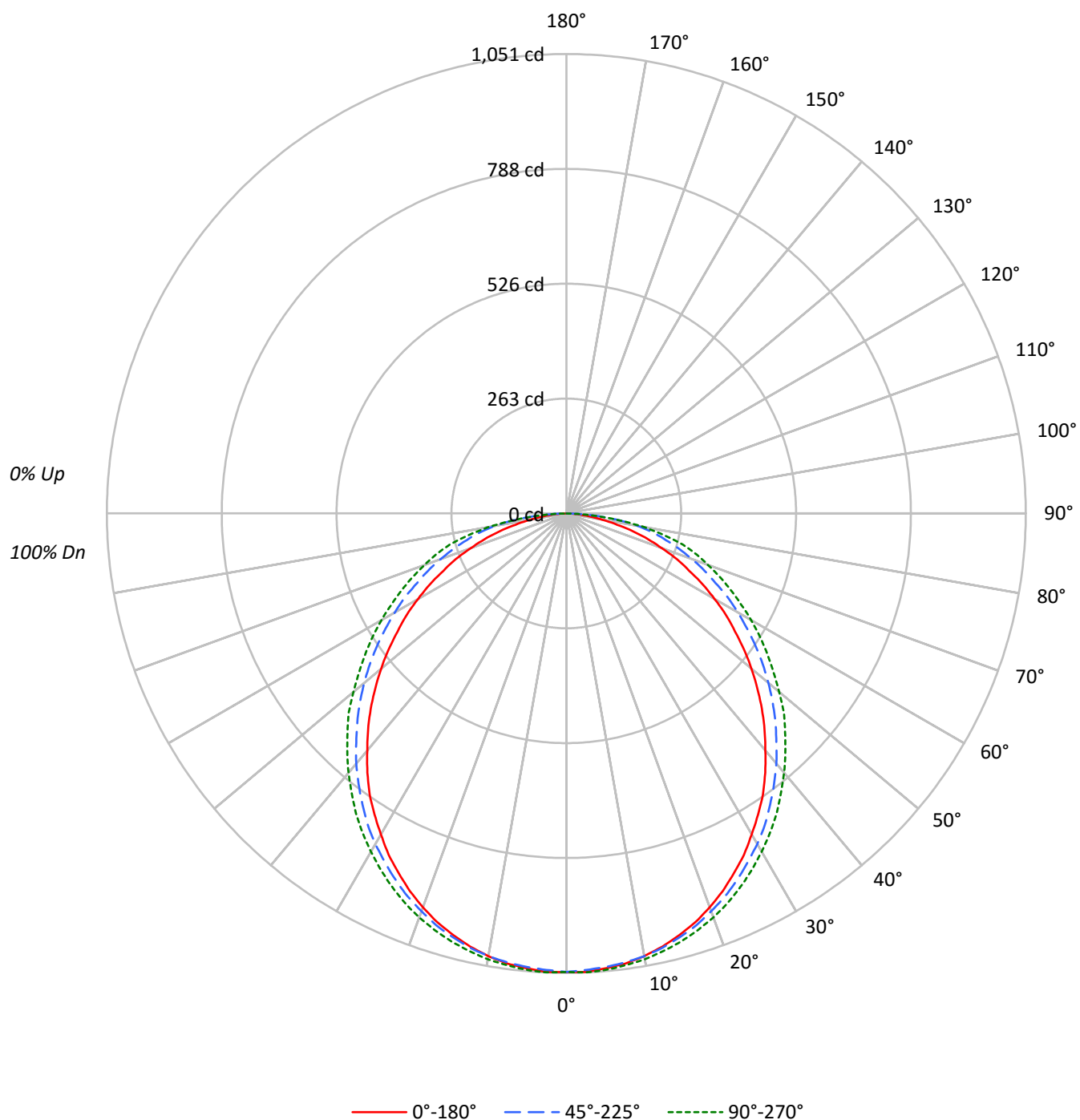
Input Watts (W): 25.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1411	1411	1411
5°	1410	1407	1416
10°	1405	1405	1415
15°	1391	1398	1412
20°	1373	1387	1408
25°	1348	1373	1400
30°	1317	1357	1388
35°	1288	1335	1377
40°	1244	1313	1361
45°	1204	1287	1346
50°	1158	1263	1330
55°	1106	1239	1317
60°	1054	1220	1315
65°	987	1199	1323
70°	914	1205	1358
75°	818	1228	1435
80°	662	1301	1404
85°	497	1142	1113



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.3	3.3
10°-20°	283.8	9.5
20°-30°	426.6	14.3
30°-40°	508.1	17.0
40°-50°	520.0	17.4
50°-60°	468.2	15.7
60°-70°	367.7	12.3
70°-80°	238.6	8.0
80°-90°	73.8	2.5
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°	809.6	27.1
0°-40°	1317.7	44.1
0°-60°	2305.9	77.2
0°-90°	2986.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2986.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1049	1049	1049	1049	1049	
5°	1044	1046	1041	1047	1048	99
15°	999	1002	1004	1012	1014	282
25°	908	915	925	940	943	418
35°	784	794	813	833	838	489
45°	633	648	676	702	708	488
55°	471	492	528	556	562	423
65°	310	334	376	408	415	309
75°	157	188	236	268	276	167
85°	32	60	74	72	72	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1049.0	1049.0	1049.0	1049.0	1049.0
2.5°	1049.9	1049.9	1045.2	1049.9	1050.9
5°	1044.3	1046.2	1041.4	1047.1	1048.1
7.5°	1038.6	1038.6	1035.7	1041.4	1042.4
10°	1028.1	1029.1	1028.1	1034.8	1035.7
12.5°	1014.9	1016.8	1017.7	1024.3	1025.3
15°	998.7	1001.6	1003.5	1012.0	1013.9
17.5°	980.7	983.6	988.3	997.8	999.7
20°	958.9	962.7	968.4	980.7	983.6
22.5°	935.2	939.0	948.5	959.8	964.6
25°	907.7	915.3	924.8	939.9	942.8
27.5°	880.2	886.8	899.1	915.3	919.1
30°	847.9	858.4	873.5	889.7	893.5
32.5°	816.6	827.1	845.1	862.2	866.9
35°	784.4	793.9	812.8	832.8	838.4
37.5°	747.4	759.7	780.6	800.5	806.2
40°	708.5	723.7	747.4	768.3	774.9
42.5°	671.5	687.6	711.3	734.1	741.7
45°	632.6	647.8	676.3	701.9	707.6
47.5°	592.8	609.9	640.2	665.8	675.3
50°	553.0	571.0	603.2	629.8	635.5
52.5°	513.1	532.1	566.2	594.7	597.5
55°	471.4	492.3	528.3	555.8	561.5
57.5°	433.4	451.5	490.4	518.8	525.4
60°	391.7	411.6	453.4	479.9	488.5
62.5°	351.9	372.7	416.4	442.9	450.5
65°	310.1	333.9	376.5	407.8	415.4
67.5°	274.1	296.9	342.4	372.7	380.3
70°	232.4	258.0	306.4	337.7	345.2
72.5°	196.3	222.9	271.3	301.6	313.0
75°	157.4	187.8	236.2	268.4	276.0
77.5°	119.5	154.6	203.9	228.6	228.6
80°	85.4	122.4	167.9	179.3	181.2
82.5°	56.0	92.0	124.2	123.3	123.3
85°	32.2	59.8	74.0	72.1	72.1
87.5°	12.3	24.7	26.6	26.6	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)