

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: P311299

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-CP250-W2A-U-6500K**

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: P311299
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-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 6500K 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: 3279.0 lumens
Efficiency: N/A
Efficacy: 120.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

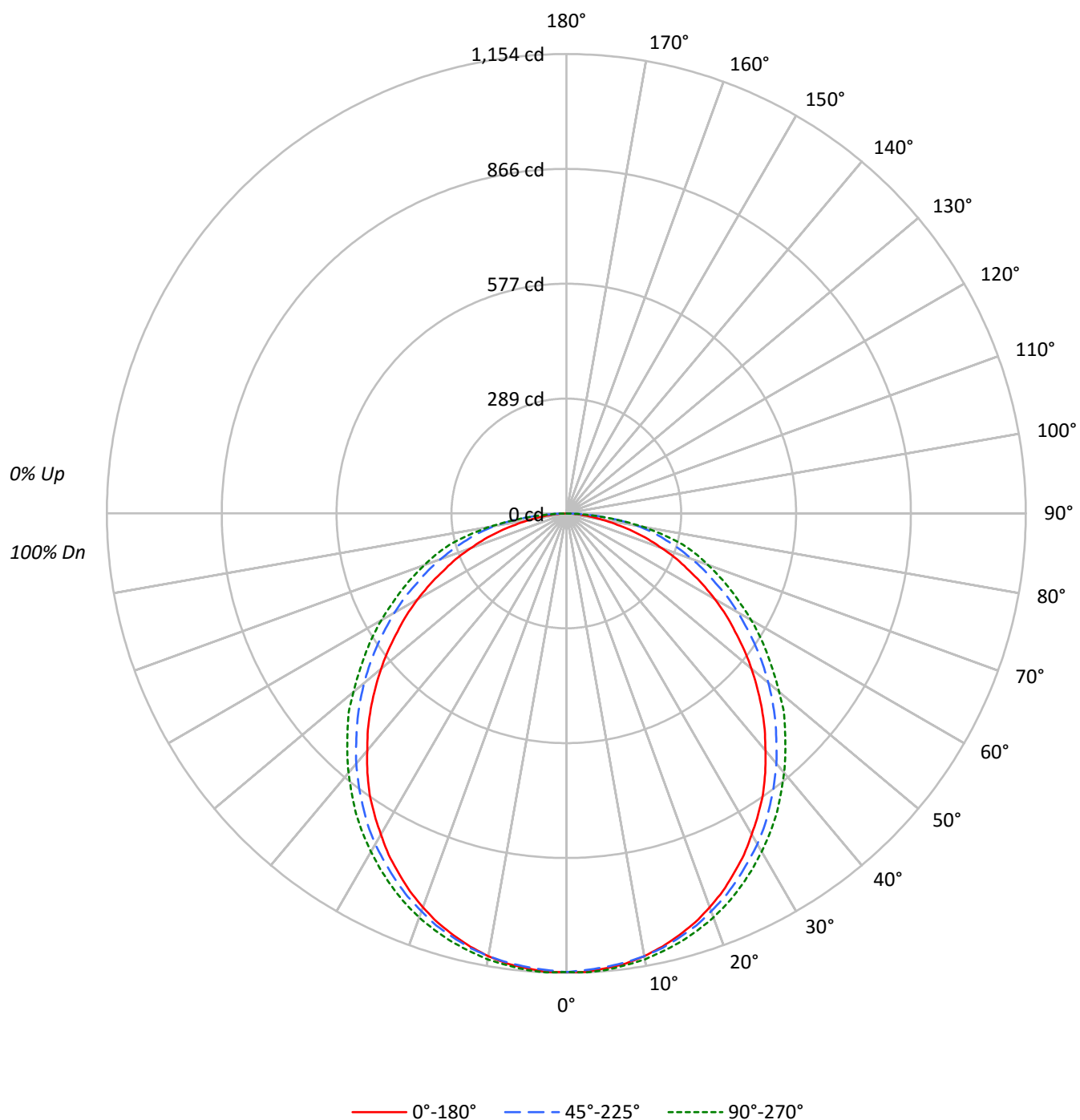
Input Watts (W): 27.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1550	1550	1550
5°	1549	1545	1554
10°	1542	1542	1554
15°	1528	1535	1551
20°	1508	1523	1547
25°	1480	1508	1537
30°	1447	1490	1524
35°	1415	1466	1512
40°	1366	1441	1495
45°	1322	1413	1478
50°	1271	1387	1461
55°	1214	1361	1446
60°	1158	1340	1443
65°	1084	1316	1452
70°	1004	1323	1491
75°	899	1348	1576
80°	726	1429	1541
85°	546	1254	1223



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.1	3.3
10°-20°	311.6	9.5
20°-30°	468.4	14.3
30°-40°	558.0	17.0
40°-50°	571.0	17.4
50°-60°	514.1	15.7
60°-70°	403.7	12.3
70°-80°	262.0	8.0
80°-90°	81.0	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°	889.1	27.1
0°-40°	1447.0	44.1
0°-60°	2532.2	77.2
0°-90°	3279.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3279.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1152	1152	1152	1152	1152	
5°	1147	1149	1144	1150	1151	109
15°	1097	1100	1102	1111	1113	309
25°	997	1005	1016	1032	1035	459
35°	861	872	893	914	921	537
45°	695	711	743	771	777	536
55°	518	541	580	610	617	464
65°	341	367	414	448	456	339
75°	173	206	259	295	303	183
85°	35	66	81	79	79	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1151.9	1151.9	1151.9	1151.9	1151.9
2.5°	1153.0	1153.0	1147.8	1153.0	1154.0
5°	1146.7	1148.8	1143.6	1149.9	1150.9
7.5°	1140.5	1140.5	1137.4	1143.6	1144.6
10°	1129.0	1130.1	1129.0	1136.3	1137.4
12.5°	1114.4	1116.5	1117.6	1124.9	1125.9
15°	1096.7	1099.9	1101.9	1111.3	1113.4
17.5°	1076.9	1080.1	1085.3	1095.7	1097.8
20°	1053.0	1057.2	1063.4	1076.9	1080.1
22.5°	1027.0	1031.1	1041.5	1054.0	1059.2
25°	996.7	1005.1	1015.5	1032.2	1035.3
27.5°	966.5	973.8	987.4	1005.1	1009.2
30°	931.1	942.6	959.3	977.0	981.1
32.5°	896.8	908.2	928.0	946.8	952.0
35°	861.3	871.8	892.6	914.5	920.7
37.5°	820.7	834.3	857.2	879.1	885.3
40°	778.0	794.7	820.7	843.6	850.9
42.5°	737.4	755.1	781.1	806.1	814.5
45°	694.7	711.4	742.6	770.7	777.0
47.5°	651.0	669.7	703.0	731.2	741.6
50°	607.2	627.0	662.4	691.6	697.8
52.5°	563.5	584.3	621.8	653.0	656.2
55°	517.6	540.6	580.1	610.3	616.6
57.5°	476.0	495.8	538.5	569.7	577.0
60°	430.2	452.0	497.9	527.0	536.4
62.5°	386.4	409.3	457.2	486.4	494.7
65°	340.6	366.6	413.5	447.9	456.2
67.5°	301.0	326.0	376.0	409.3	417.7
70°	255.2	283.3	336.4	370.8	379.1
72.5°	215.6	244.8	297.9	331.2	343.7
75°	172.9	206.2	259.3	294.8	303.1
77.5°	131.2	169.8	223.9	251.0	251.0
80°	93.7	134.4	184.4	196.8	198.9
82.5°	61.5	101.0	136.4	135.4	135.4
85°	35.4	65.6	81.2	79.2	79.2
87.5°	13.5	27.1	29.2	29.2	28.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)