

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: P309918

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CA125-W2A-U-4500K**

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: P309918
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 2190.0 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

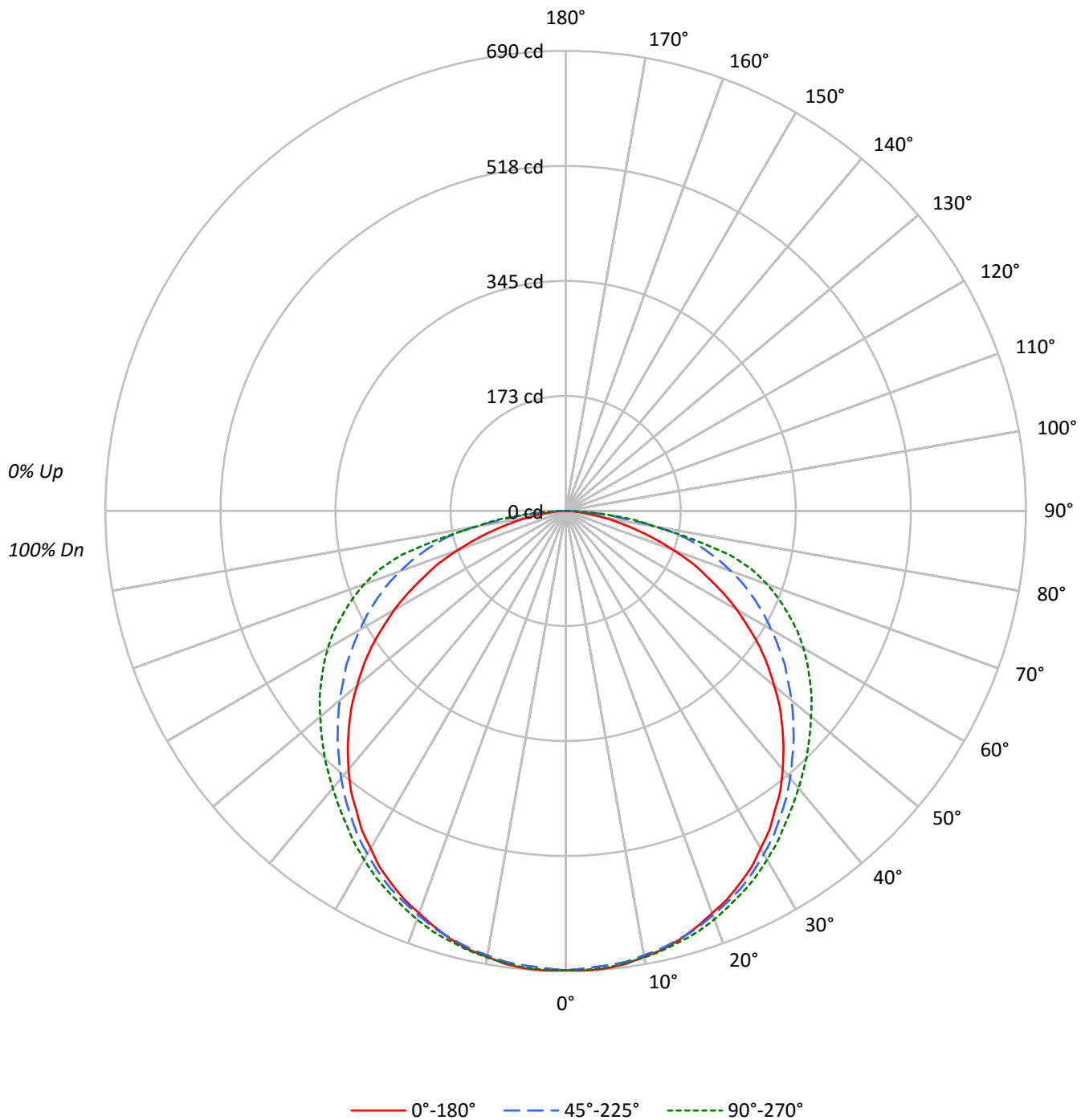
Input Watts (W): 26.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	68	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	927	927	927
5°	930	924	929
10°	928	925	929
15°	926	925	931
20°	919	924	933
25°	916	926	935
30°	908	923	938
35°	899	921	942
40°	889	920	954
45°	874	920	976
50°	855	925	1005
55°	833	940	1050
60°	798	959	1108
65°	747	993	1176
70°	679	1039	1265
75°	576	1095	1321
80°	455	1103	1069
85°	335	838	939



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.3	3.0
10°-20°	188.0	8.6
20°-30°	287.5	13.1
30°-40°	351.5	16.0
40°-50°	374.6	17.1
50°-60°	358.2	16.4
60°-70°	303.4	13.9
70°-80°	203.9	9.3
80°-90°	57.5	2.6
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°	540.9	24.7
0°-40°	892.3	40.7
0°-60°	1625.1	74.2
0°-90°	2190.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2190.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	689	689	689	689	689	
5°	689	688	684	688	688	65
15°	665	665	664	669	668	187
25°	617	619	624	629	630	284
35°	548	552	560	571	574	343
45°	460	467	483	504	513	354
55°	355	368	401	432	448	316
65°	235	258	312	353	369	233
75°	111	151	211	247	254	119
85°	22	44	54	59	61	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	688.7	688.7	688.7	688.7	688.7
2.5°	689.8	689.8	686.5	688.7	688.7
5°	688.7	687.6	684.3	687.6	687.6
7.5°	685.4	684.3	682.2	685.4	684.3
10°	678.9	678.9	676.7	680.0	680.0
12.5°	673.5	672.4	671.3	675.7	674.6
15°	664.8	664.8	663.7	669.1	668.1
17.5°	653.9	655.0	656.1	660.4	661.5
20°	642.0	644.2	645.2	651.8	651.8
22.5°	631.1	632.2	634.4	640.9	640.9
25°	617.0	619.2	623.5	628.9	630.0
27.5°	602.9	604.0	609.4	617.0	618.1
30°	584.4	587.7	594.2	602.9	604.0
32.5°	568.1	571.4	579.0	587.7	589.8
35°	547.5	551.8	560.5	571.4	573.5
37.5°	529.0	532.3	543.1	555.1	558.3
40°	506.2	512.7	523.6	537.7	543.1
42.5°	483.4	489.9	502.9	521.4	527.9
45°	459.5	467.1	483.4	504.0	512.7
47.5°	435.6	444.3	462.7	486.6	496.4
50°	408.4	419.3	442.1	469.3	480.1
52.5°	382.4	395.4	420.4	450.8	464.9
55°	355.2	368.2	400.8	432.3	447.5
57.5°	324.8	342.2	378.0	413.9	430.2
60°	296.6	312.8	356.3	395.4	411.7
62.5°	266.1	287.9	334.6	375.8	392.1
65°	234.6	258.5	311.8	353.0	369.3
67.5°	206.4	232.5	288.9	330.2	346.5
70°	172.7	205.3	264.0	305.2	321.5
72.5°	141.2	177.1	237.9	278.1	293.3
75°	110.8	151.0	210.7	246.6	254.2
77.5°	82.6	124.9	182.5	197.7	192.3
80°	58.7	99.9	142.3	134.7	138.0
82.5°	38.0	76.0	88.0	99.9	103.2
85°	21.7	44.5	54.3	58.7	60.8
87.5°	9.8	16.3	21.7	21.7	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)