

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: P309297

Luminaire Tested: **24FCZ2-35-UNV-L82765-HRP-CP125-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: P309297
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35-UNV-L82765-HRP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 2448.0 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

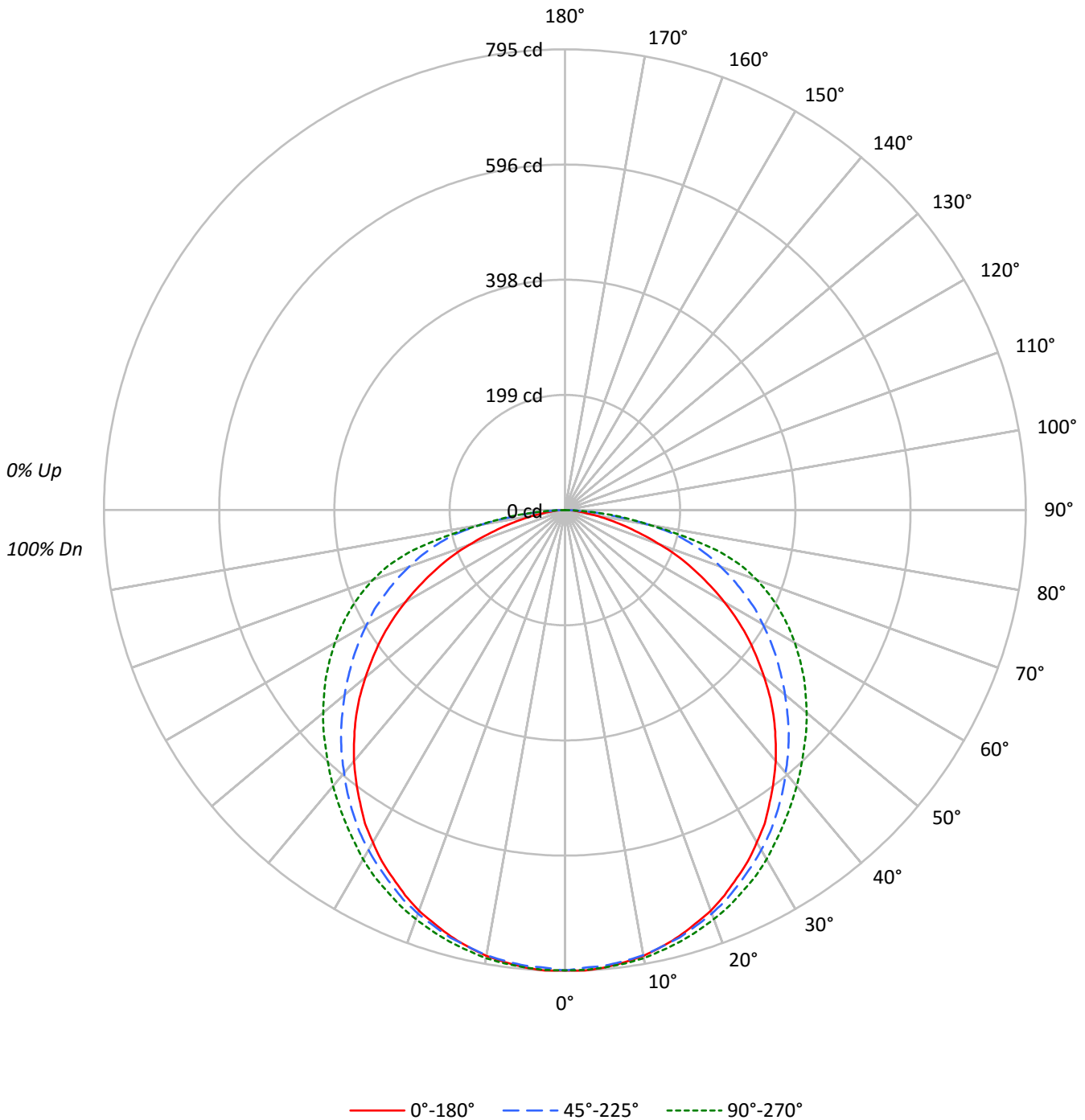
Input Watts (W): 28.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1069	1069	1069
5°	1070	1066	1070
10°	1067	1066	1073
15°	1061	1064	1074
20°	1054	1061	1076
25°	1041	1056	1077
30°	1029	1052	1081
35°	1012	1047	1082
40°	994	1040	1093
45°	971	1039	1110
50°	940	1038	1139
55°	906	1046	1180
60°	855	1062	1233
65°	790	1087	1302
70°	689	1125	1387
75°	559	1183	1433
80°	413	1159	1159
85°	316	854	965



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.2	3.1
10°-20°	216.1	8.8
20°-30°	328.9	13.4
30°-40°	399.4	16.3
40°-50°	422.0	17.2
50°-60°	398.2	16.3
60°-70°	331.1	13.5
70°-80°	217.8	8.9
80°-90°	59.4	2.4
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°	620.2	25.3
0°-40°	1019.6	41.7
0°-60°	1839.8	75.2
0°-90°	2448.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2448.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	794	794	794	794	794	
5°	792	792	789	792	792	75
15°	762	762	764	771	771	215
25°	701	705	711	724	726	323
35°	616	623	638	654	659	386
45°	510	521	546	573	583	393
55°	386	403	446	488	503	344
65°	248	277	341	392	409	245
75°	108	157	228	270	276	116
85°	20	45	55	62	62	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	794.3	794.3	794.3	794.3	794.3
2.5°	795.3	794.3	790.2	794.3	794.3
5°	792.2	792.2	789.1	792.2	792.2
7.5°	787.1	787.1	785.0	789.1	789.1
10°	780.9	780.9	779.9	785.0	785.0
12.5°	771.7	772.7	771.7	777.9	777.9
15°	761.5	762.5	763.5	770.7	770.7
17.5°	748.1	750.2	752.2	760.4	761.5
20°	735.8	736.9	741.0	750.2	751.2
22.5°	719.4	722.5	727.6	736.9	739.9
25°	701.0	705.1	711.2	723.5	725.6
27.5°	683.6	686.6	694.8	708.2	712.3
30°	662.1	667.2	677.4	690.7	695.9
32.5°	641.6	646.7	659.0	673.3	677.4
35°	615.9	623.1	637.5	653.9	659.0
37.5°	591.3	598.5	615.9	634.4	640.5
40°	565.7	573.9	592.4	613.9	622.1
42.5°	538.0	549.3	569.8	593.4	602.6
45°	510.4	520.6	546.2	572.9	583.1
47.5°	480.7	493.0	520.6	552.4	564.7
50°	448.9	464.3	496.0	530.9	544.2
52.5°	417.1	434.5	470.4	509.3	523.7
55°	386.4	402.8	445.8	487.8	503.2
57.5°	352.5	373.0	420.2	465.3	480.7
60°	317.7	340.2	394.6	441.7	458.1
62.5°	282.9	308.5	370.0	417.1	434.5
65°	248.0	276.7	341.3	391.5	408.9
67.5°	214.2	246.0	314.6	364.8	382.3
70°	175.2	215.2	285.9	335.1	352.5
72.5°	139.4	185.5	258.3	304.4	319.8
75°	107.6	156.8	227.5	269.5	275.7
77.5°	78.9	128.1	195.7	210.1	211.1
80°	53.3	102.5	149.6	147.6	149.6
82.5°	34.8	76.9	94.3	105.6	106.6
85°	20.5	45.1	55.3	61.5	62.5
87.5°	10.2	15.4	19.5	20.5	22.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)