

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: P309301

Luminaire Tested: **24FCZ2-35-UNV-L82765-HRP-CP125-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: P309301
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-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 2519.0 lumens
Efficiency: N/A
Efficacy: 86.3 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

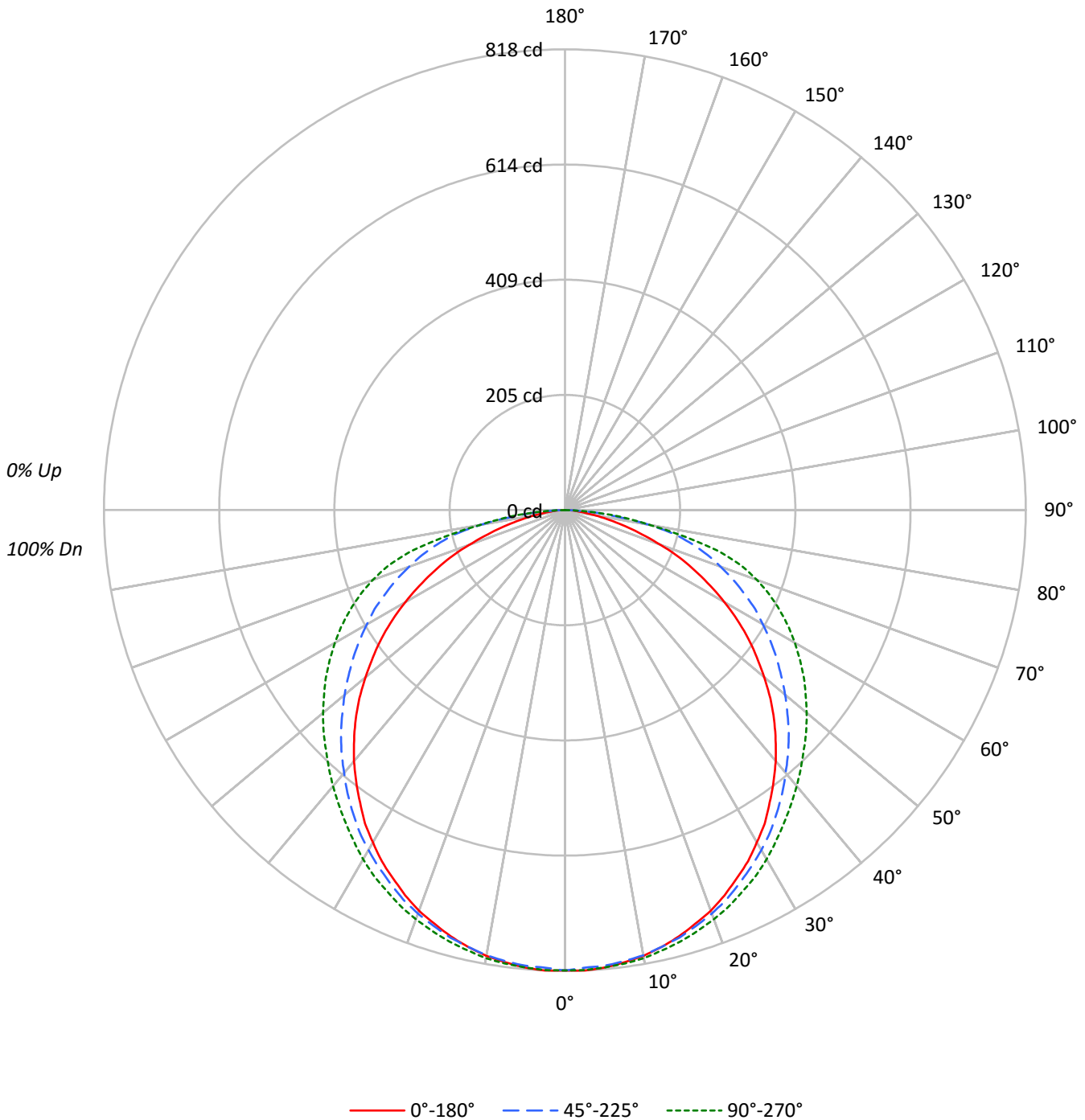
Input Watts (W): 29.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1100	1100	1100
5°	1101	1097	1101
10°	1098	1096	1104
15°	1091	1094	1105
20°	1084	1092	1107
25°	1071	1087	1108
30°	1058	1083	1113
35°	1041	1077	1114
40°	1022	1071	1124
45°	999	1070	1142
50°	967	1068	1172
55°	933	1076	1215
60°	880	1093	1269
65°	812	1118	1340
70°	709	1157	1427
75°	575	1217	1475
80°	425	1193	1193
85°	326	878	993



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	3.1
10°-20°	222.3	8.8
20°-30°	338.5	13.4
30°-40°	411.0	16.3
40°-50°	434.2	17.2
50°-60°	409.7	16.3
60°-70°	340.7	13.5
70°-80°	224.1	8.9
80°-90°	61.1	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°	638.2	25.3
0°-40°	1049.2	41.7
0°-60°	1893.1	75.2
0°-90°	2519.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2519.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	817	817	817	817	817	
5°	815	815	812	815	815	77
15°	784	785	786	793	793	221
25°	721	726	732	744	747	333
35°	634	641	656	673	678	397
45°	525	536	562	590	600	404
55°	398	414	459	502	518	354
65°	255	285	351	403	421	252
75°	111	161	234	277	284	119
85°	21	46	57	63	64	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	817.3	817.3	817.3	817.3	817.3
2.5°	818.3	817.3	813.1	817.3	817.3
5°	815.2	815.2	812.0	815.2	815.2
7.5°	809.9	809.9	807.8	812.0	812.0
10°	803.6	803.6	802.5	807.8	807.8
12.5°	794.1	795.1	794.1	800.4	800.4
15°	783.5	784.6	785.7	793.0	793.0
17.5°	769.8	771.9	774.1	782.5	783.5
20°	757.2	758.2	762.5	771.9	773.0
22.5°	740.3	743.5	748.7	758.2	761.4
25°	721.3	725.5	731.9	744.5	746.6
27.5°	703.4	706.6	715.0	728.7	732.9
30°	681.3	686.5	697.1	710.8	716.1
32.5°	660.2	665.4	678.1	692.9	697.1
35°	633.8	641.2	655.9	672.8	678.1
37.5°	608.5	615.9	633.8	652.8	659.1
40°	582.1	590.6	609.5	631.7	640.1
42.5°	553.6	565.2	586.3	610.6	620.1
45°	525.2	535.7	562.1	589.5	600.1
47.5°	494.6	507.2	535.7	568.4	581.1
50°	461.9	477.7	510.4	546.3	560.0
52.5°	429.2	447.1	484.0	524.1	538.9
55°	397.6	414.4	458.7	502.0	517.8
57.5°	362.8	383.9	432.4	478.8	494.6
60°	326.9	350.1	406.0	454.5	471.4
62.5°	291.1	317.4	380.7	429.2	447.1
65°	255.2	284.7	351.2	402.8	420.8
67.5°	220.4	253.1	323.8	375.4	393.4
70°	180.3	221.5	294.2	344.8	362.8
72.5°	143.4	190.9	265.8	313.2	329.0
75°	110.7	161.3	234.1	277.4	283.7
77.5°	81.2	131.8	201.4	216.2	217.2
80°	54.8	105.5	154.0	151.9	154.0
82.5°	35.9	79.1	97.0	108.6	109.7
85°	21.1	46.4	56.9	63.3	64.3
87.5°	10.5	15.8	20.0	21.1	23.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)