

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: P309338

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CP125-W2A-U-2700K**

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: P309338
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: 24FCZ2-40HE-UNV-L82765-HRP-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 2700K 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: 2532.0 lumens
Efficiency: N/A
Efficacy: 83.3 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

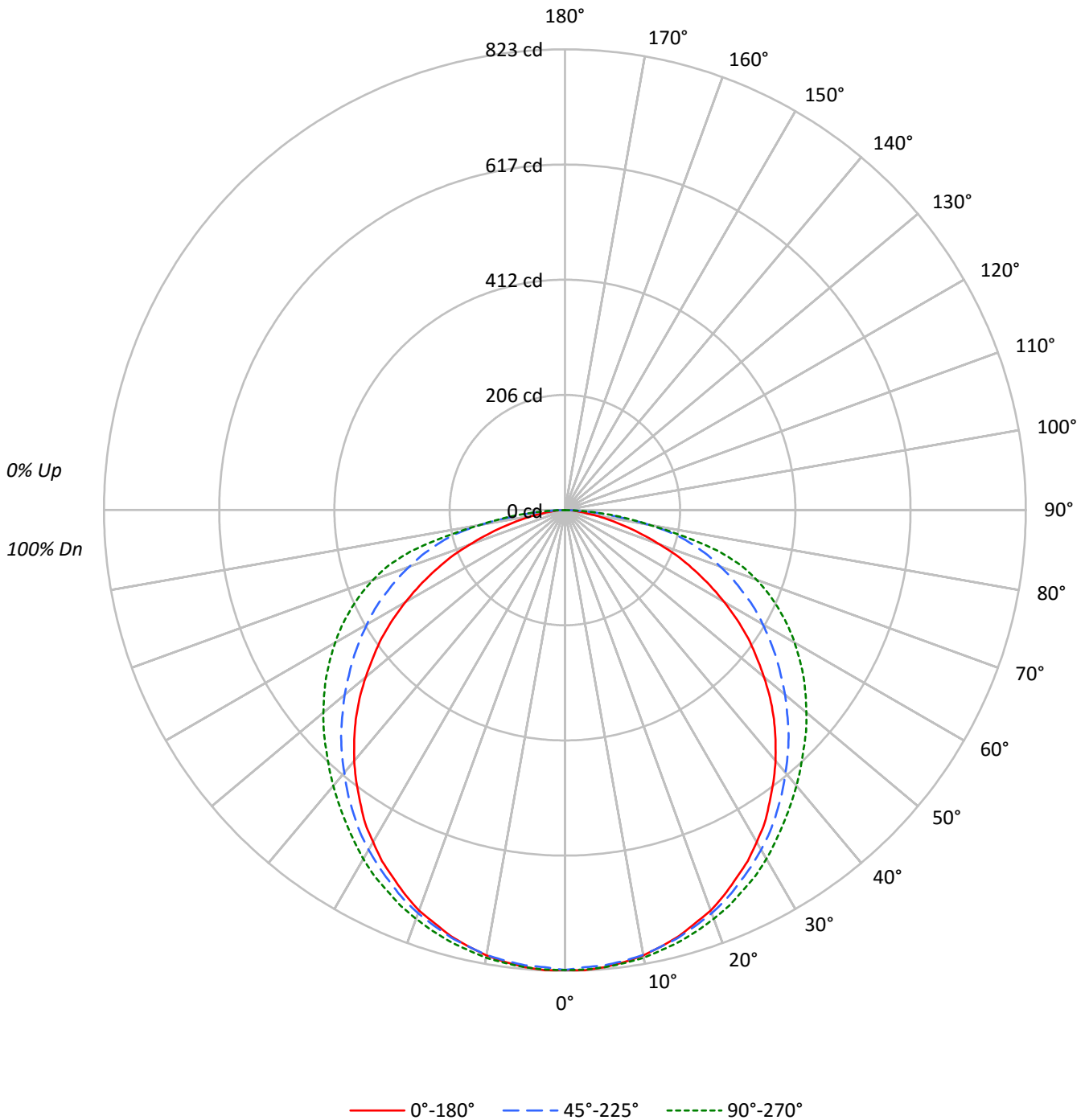
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1105	1105	1105
5°	1107	1102	1107
10°	1104	1102	1109
15°	1097	1100	1110
20°	1090	1097	1113
25°	1076	1092	1114
30°	1064	1089	1118
35°	1046	1083	1120
40°	1028	1076	1130
45°	1004	1075	1148
50°	972	1074	1178
55°	937	1082	1221
60°	884	1098	1275
65°	817	1124	1346
70°	713	1163	1434
75°	579	1223	1482
80°	427	1199	1199
85°	327	883	999



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	3.1
10°-20°	223.5	8.8
20°-30°	340.2	13.4
30°-40°	413.1	16.3
40°-50°	436.4	17.2
50°-60°	411.8	16.3
60°-70°	342.4	13.5
70°-80°	225.3	8.9
80°-90°	61.4	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°	641.5	25.3
0°-40°	1054.6	41.7
0°-60°	1902.9	75.2
0°-90°	2532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	822	822	822	822	822	
5°	819	819	816	819	819	78
15°	788	789	790	797	797	222
25°	725	729	736	748	750	334
35°	637	644	659	676	682	399
45°	528	538	565	592	603	407
55°	400	417	461	505	520	356
65°	256	286	353	405	423	254
75°	111	162	235	279	285	120
85°	21	47	57	64	65	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	821.5	821.5	821.5	821.5	821.5
2.5°	822.6	821.5	817.3	821.5	821.5
5°	819.4	819.4	816.2	819.4	819.4
7.5°	814.1	814.1	812.0	816.2	816.2
10°	807.7	807.7	806.7	812.0	812.0
12.5°	798.2	799.2	798.2	804.5	804.5
15°	787.6	788.6	789.7	797.1	797.1
17.5°	773.8	775.9	778.0	786.5	787.6
20°	761.1	762.1	766.4	775.9	777.0
22.5°	744.1	747.3	752.6	762.1	765.3
25°	725.0	729.3	735.6	748.4	750.5
27.5°	707.0	710.2	718.7	732.5	736.7
30°	684.8	690.1	700.7	714.4	719.7
32.5°	663.6	668.9	681.6	696.4	700.7
35°	637.1	644.5	659.3	676.3	681.6
37.5°	611.6	619.0	637.1	656.1	662.5
40°	585.1	593.6	612.7	634.9	643.4
42.5°	556.5	568.2	589.4	613.7	623.3
45°	527.9	538.5	565.0	592.5	603.1
47.5°	497.1	509.9	538.5	571.3	584.1
50°	464.3	480.2	513.0	549.1	562.9
52.5°	431.4	449.4	486.5	526.8	541.7
55°	399.6	416.6	461.1	504.6	520.5
57.5°	364.6	385.8	434.6	481.2	497.1
60°	328.6	351.9	408.1	456.9	473.8
62.5°	292.6	319.1	382.7	431.4	449.4
65°	256.5	286.2	353.0	404.9	422.9
67.5°	221.5	254.4	325.4	377.4	395.4
70°	181.3	222.6	295.7	346.6	364.6
72.5°	144.2	191.9	267.1	314.8	330.7
75°	111.3	162.2	235.3	278.8	285.1
77.5°	81.6	132.5	202.5	217.3	218.4
80°	55.1	106.0	154.8	152.6	154.8
82.5°	36.0	79.5	97.5	109.2	110.2
85°	21.2	46.6	57.2	63.6	64.7
87.5°	10.6	15.9	20.1	21.2	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)