

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: 4562

Luminaire Tested: **FUS-D12-340**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 4562
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FUS-D12-340
Description: FAIL-SAFE SURF MT 3/40 W/PRIS LENS
Light Source: F40T12RS/WW 3200 LUMENS
Ballast/Driver: -

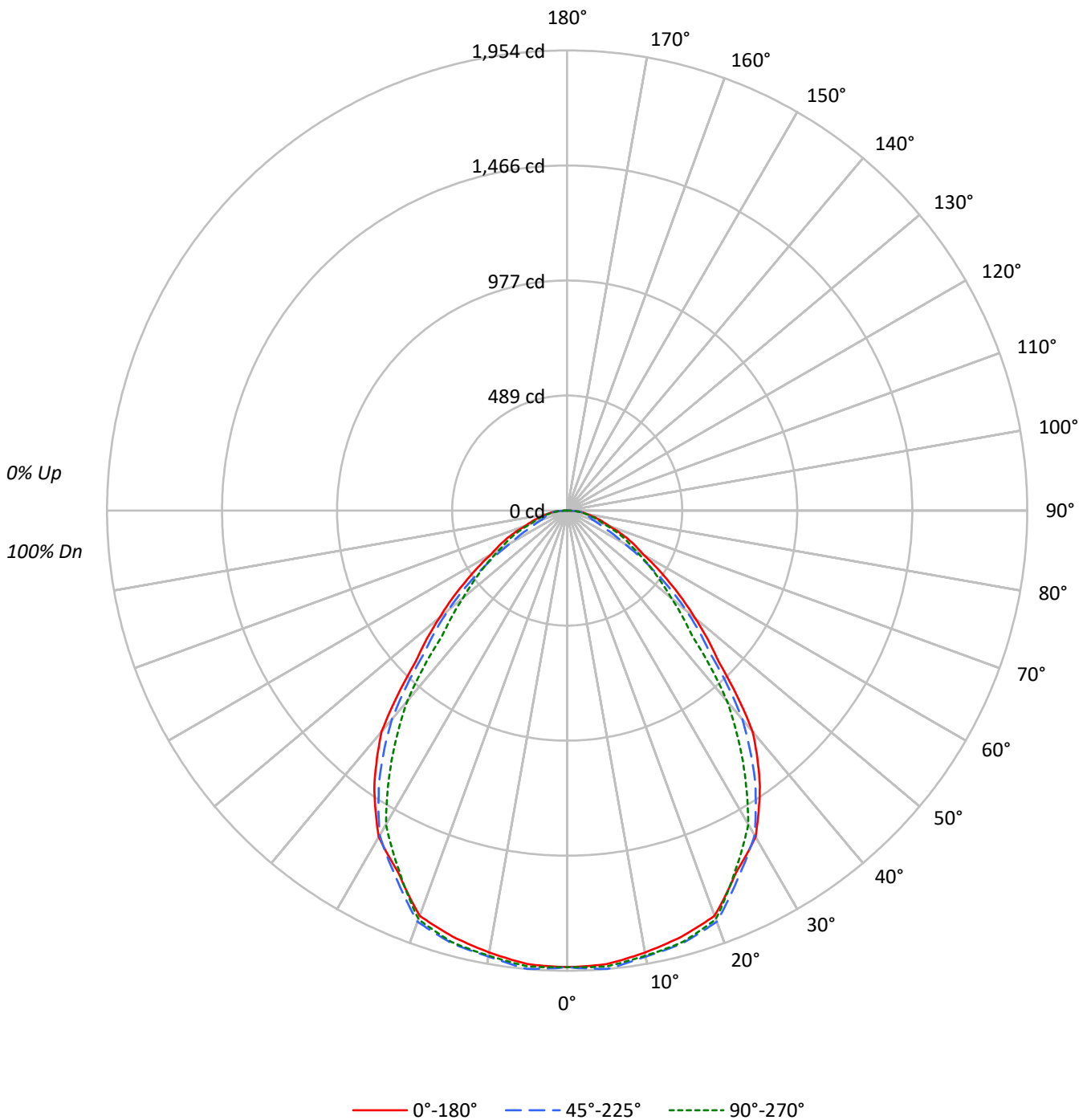
Summary

Lumens per Lamp: 3200 (3 lamps)
Luminaire Lumens: 3851.5 lumens
Efficiency: 40.1%
Efficacy: 25.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.18 / 1.22
Luminous Opening: Rectangular (W 0.63' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 153
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	50	30	10	0	
RCR																						
0	48	48	48	48	47	47	47	47	45	45	45	43	43	43	41	41	41	40				40
1	44	43	41	40	43	42	41	39	40	39	38	39	38	37	37	37	36	35				35
2	41	38	36	34	40	38	35	34	36	34	33	35	33	32	34	33	31	31				31
3	38	34	32	29	37	34	31	29	33	30	29	32	30	28	31	29	28	27				27
4	35	31	28	26	34	31	28	26	30	27	25	29	27	25	28	26	25	24				24
5	33	28	25	23	32	28	25	23	27	24	22	26	24	22	26	24	22	21				21
6	31	26	23	20	30	25	22	20	25	22	20	24	22	20	23	21	20	19				19
7	28	24	20	18	28	23	20	18	23	20	18	22	20	18	22	19	18	17				17
8	27	22	19	17	26	21	19	16	21	18	16	20	18	16	20	18	16	16				16
9	25	20	17	15	24	20	17	15	19	17	15	19	17	15	19	16	15	14				14
10	24	19	16	14	23	18	16	14	18	15	14	18	15	14	17	15	14	13				13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8450	8450	8450
5°	8459	8548	8498
10°	8432	8510	8493
15°	8455	8579	8559
20°	8492	8616	8565
25°	8158	8269	8118
30°	8052	8012	7744
35°	7594	7396	6923
40°	6972	6591	6010
45°	5623	5299	4616
50°	4794	4486	3907
55°	4014	3486	3372
60°	3259	2433	2882
65°	2936	1772	2616
70°	2369	1457	2112
75°	2255	1607	2009
80°	2131	2144	1943
85°	2715	2505	2300



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	184.7	4.8	1.9	0°	1939	1939	1939	1939	1939	
10°-20°	534.3	13.9	5.6	5°	1933	1950	1954	1944	1942	184
20°-30°	788.3	20.5	8.2	15°	1874	1891	1901	1893	1897	529
30°-40°	856.0	22.2	8.9	25°	1696	1719	1719	1692	1688	787
40°-50°	670.7	17.4	7.0	35°	1427	1416	1390	1325	1301	888
50°-60°	425.1	11.0	4.4	45°	912	894	860	786	749	723
60°-70°	219.9	5.7	2.3	55°	528	502	459	441	444	477
70°-80°	120.9	3.1	1.3	65°	285	226	172	200	254	279
80°-90°	51.6	1.3	0.5	75°	134	121	95	106	119	142
90°-100°	0.0	0.0	0.0	85°	54	54	50	48	46	53
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	1507.3	39.1	15.7							
0°-40°	2363.3	61.4	24.6							
0°-60°	3459.1	89.8	36.0							
0°-90°	3851.5	100.0	40.1							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	3851.5	100.0	40.1							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1938.8	1938.8	1938.8	1938.8	1938.8
5°	1933.3	1949.9	1953.7	1944.3	1942.4
10°	1905.1	1922.8	1922.8	1918.9	1918.9
15°	1873.8	1890.8	1901.2	1892.9	1896.9
20°	1830.9	1847.8	1857.5	1841.9	1846.5
25°	1696.3	1719.0	1719.4	1692.1	1688.0
30°	1599.9	1605.7	1592.0	1550.8	1538.7
35°	1427.3	1416.2	1390.0	1325.1	1301.1
40°	1225.4	1211.6	1158.4	1090.3	1056.3
45°	912.2	893.8	859.6	785.5	748.8
50°	707.0	693.0	661.6	607.0	576.2
55°	528.2	502.4	458.8	440.8	443.8
60°	373.9	325.1	279.1	286.8	330.6
65°	284.7	225.9	171.8	199.6	253.7
70°	185.9	154.7	114.3	136.3	165.7
75°	133.9	121.1	95.4	105.6	119.3
80°	84.9	97.4	85.4	89.1	77.4
85°	54.3	54.3	50.1	48.1	46.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)