Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P561447

Luminaire Tested: FSR-12-4-LD4-2HI-40-UNV-93-87-EDD

Issue Date: 7/20/2021

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Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P561447
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab:	INNOVATION CENTER
Issue Date:	7/20/2021
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	FAIL-SAFE
Catalog Number:	FSR-12-4-LD4-2HI-40-UNV-93-87-EDD
Description:	1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	7732.0 lumens
Efficiency:	N/A
Efficacy:	89.5 lumens/watt
Spacing Criteria (0/90/45):	1.1 / 1 / 1.15
Luminous Opening:	Rectangular (W 1' x L: 4' x H: 0')
CIE Type:	Direct

Input Watts (W):	86.4
Input Voltage (V):	
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:	24 FT

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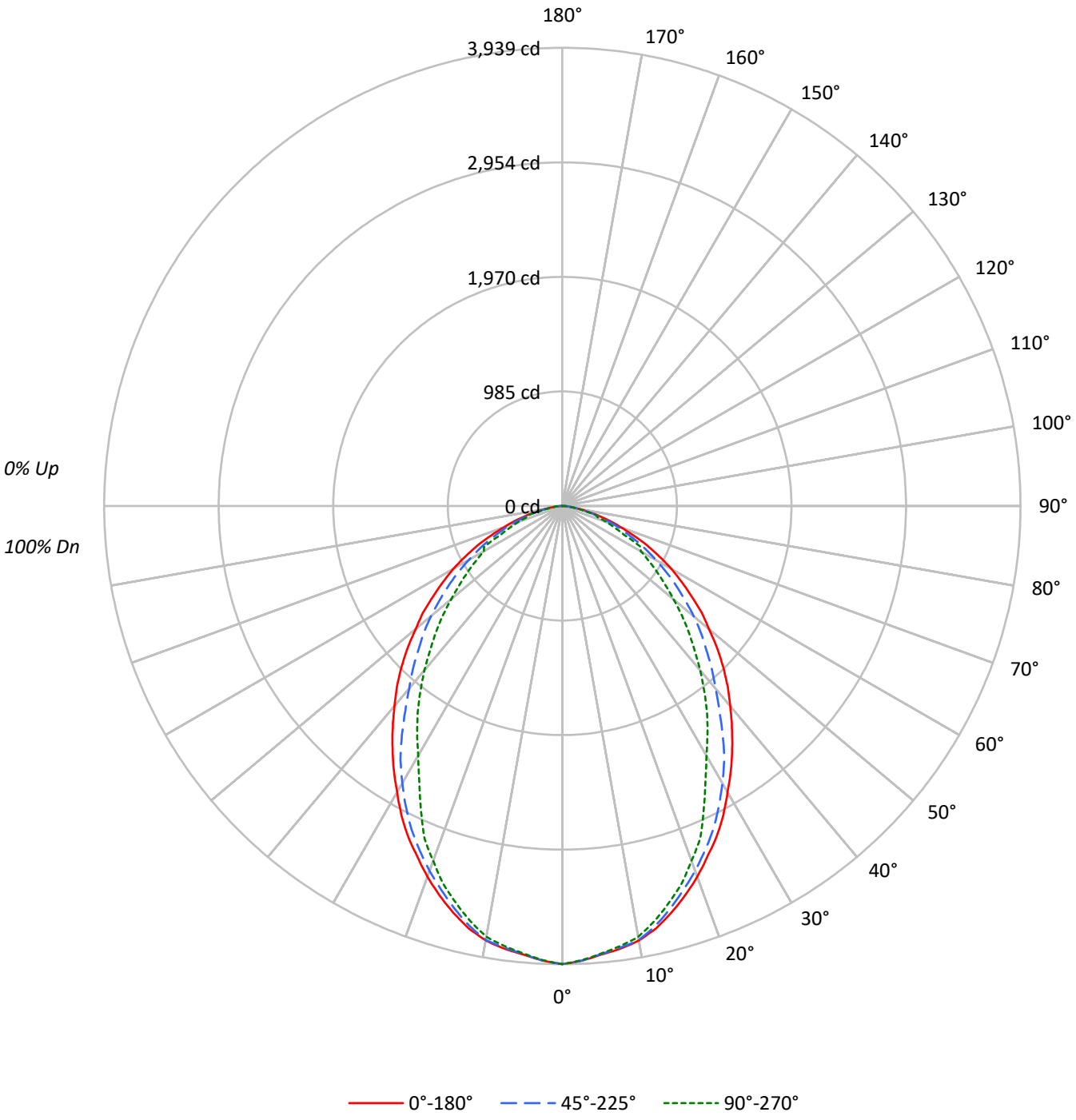
Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10599	10599	10599
5°	10455	10442	10430
10°	10364	10351	10277
15°	10084	9983	9843
20°	9714	9558	9297
25°	9315	9112	8544
30°	8828	8546	7697
35°	8362	7898	7120
40°	7886	7198	6478
45°	7434	6654	5857
50°	6881	6176	5223
55°	6366	5597	4678
60°	5832	4999	4190
65°	5131	4378	3711
70°	4227	3833	3153
75°	3361	2935	3078
80°	2258	2117	1976
85°	1405	1686	1967

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 7434 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	366.6	4.7
10°-20°	1006.2	13.0
20°-30°	1393.0	18.0
30°-40°	1485.3	19.2
40°-50°	1355.1	17.5
50°-60°	1061.6	13.7
60°-70°	691.9	8.9
70°-80°	306.5	4.0
80°-90°	65.8	0.9
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°	2765.8	35.8
0°-40°	4251.1	55.0
0°-60°	6667.8	86.2
0°-90°	7732.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7732.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3939	3939	3939	3939	3939	
5°	3870	3866	3866	3861	3861	367
15°	3620	3620	3583	3547	3533	1018
25°	3137	3119	3069	2960	2878	1440
35°	2545	2527	2404	2222	2167	1591
45°	1953	1912	1748	1603	1539	1505
55°	1357	1316	1193	1052	997	1217
65°	806	760	688	701	583	794
75°	323	300	282	269	296	346
85°	46	50	55	59	64	63
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	*3938.6*	*3938.6*	*3938.6*	*3938.6*	*3938.6*
2.5°	*3911.3*	3911.3	3911.3	3906.7	3906.7
5°	*3870.3*	3865.7	3865.7	3861.2	3861.2
7.5°	*3838.4*	3833.9	3829.3	3824.7	3815.6
10°	*3792.9*	3792.9	3788.3	3765.6	3761.0
12.5°	*3720.0*	3715.5	3697.3	3665.4	3656.3
15°	*3619.8*	3619.8	3583.4	3547.0	3533.3
17.5°	*3510.6*	3506.0	3460.5	3424.1	3405.8
20°	*3392.2*	3383.1	3337.5	3278.4	3246.5
22.5°	*3260.1*	3260.1	3205.5	3128.1	3096.2
25°	*3137.2*	3119.0	3068.9	2959.6	2877.7
27.5°	*2996.1*	2968.7	2914.1	2759.3	2663.7
30°	*2841.2*	2827.6	2750.2	2549.8	2477.0
32.5°	*2695.5*	2672.8	2590.8	2381.4	2322.2
35°	*2545.3*	2527.1	2404.1	2222.0	2167.4
37.5°	*2395.0*	2372.3	2217.4	2071.7	2003.4
40°	*2244.8*	2217.4	2049.0	1916.9	1844.1
42.5°	*2103.6*	2067.2	1903.3	1762.1	1680.2
45°	*1953.4*	1912.4	1748.5	1602.8	1539.0
47.5°	*1803.1*	1766.7	1616.4	1466.2	1393.3
50°	*1643.7*	1611.9	1475.3	1325.0	1247.6
52.5°	*1511.7*	1461.6	1329.6	1179.3	1115.6
55°	*1356.9*	1315.9	1193.0	1051.8	997.2
57.5°	*1215.7*	1174.7	1060.9	928.9	883.3
60°	*1083.7*	1024.5	928.9	815.0	778.6
62.5°	*938.0*	892.4	810.5	714.9	760.4
65°	*805.9*	760.4	687.5	701.2	582.8
67.5°	*660.2*	637.5	573.7	510.0	491.8
70°	*537.3*	510.0	487.2	418.9	400.7
72.5°	*428.0*	400.7	368.8	332.4	318.7
75°	*323.3*	300.5	282.3	268.6	296.0
77.5°	*223.1*	214.0	200.3	186.7	182.1
80°	*145.7*	141.2	136.6	132.0	127.5
82.5°	*86.5*	86.5	86.5	86.5	86.5
85°	*45.5*	50.1	54.6	59.2	63.7
87.5°	*27.3*	27.3	31.9	36.4	41.0
90°	*0.0*	0.0	0.0	0.0	0.0

(END OF REPORT)