

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: NEO-RAY

Report Number: P646635

Luminaire Tested: S123DR-S340D927-X4F0-XX-UDD-G-W

Issue Date: 3/20/2023

Test Information

Test Method: LM-79-2019
Report Number: P646635
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1)
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DR-S340D927-X4F0-XX-UDD-G-W
Description: DEFINE 3 DIRECT RECESSED WITH WALL GRAZE FLUSH OPTIC
STANDARD LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1197.6 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.22' x H: 0')
CIE Type: Direct

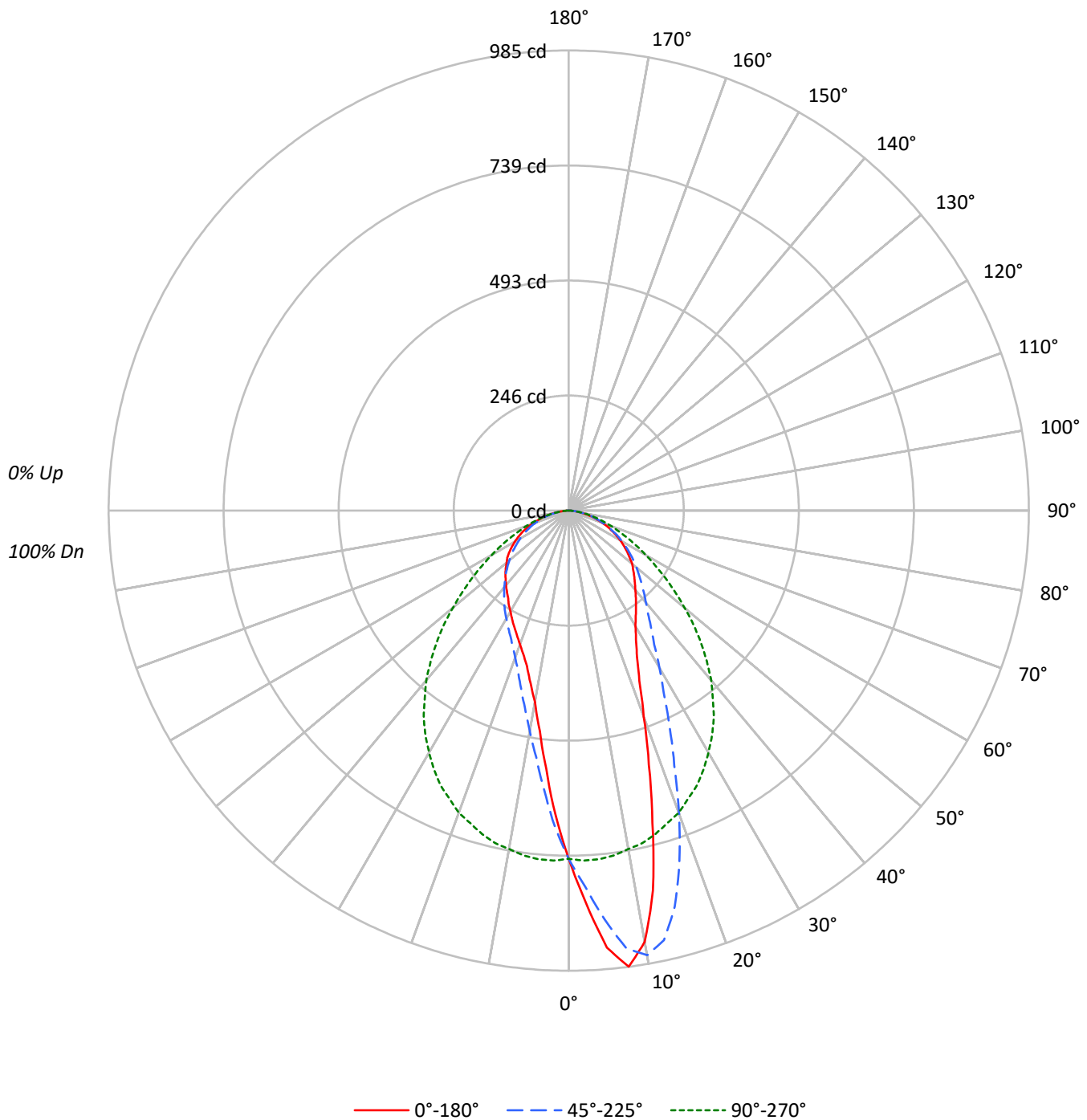
Input Watts (W): 11.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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CATALOG NUMBER: S123DR-S340D927-X4F0-XX-UDD-G-W

Luminous Intensity Polar Plot



CATALOG NUMBER: S123DR-S340D927-X4F0-XX-UDD-G-W

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100						
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86						
2	101	94	88	82	99	92	86	82	88	84	80	85	81	78	82	79	76	74						
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	64						
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56						
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50						
6	74	62	54	48	73	61	53	48	60	53	47	58	52	47	56	51	47	45						
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40						
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37						
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	40	35	34						
10	58	45	38	33	57	45	38	33	44	37	33	43	37	33	42	37	33	31						

	0°	45°	90°	135°	180°
0°	8981	8981	8981	8981	8981
5°	11359	10622	9062	7267	6710
10°	11468	11824	9001	5869	5087
15°	8638	10942	8940	4919	4301
20°	6019	8848	8826	4289	3907
25°	4589	6787	8631	3931	3665
30°	3971	5394	8320	3715	3470
35°	3683	4517	7962	3541	3333
40°	3487	4042	7459	3379	3286
45°	3371	3754	6819	3236	3265
50°	3312	3547	6062	3112	3249
55°	3189	3351	5319	3002	3262
60°	3075	3167	4584	2892	3210
65°	2888	2968	3954	2771	3145
70°	2667	2755	3364	2621	2963
75°	2416	2495	2882	2398	2705
80°	1991	2137	2283	2089	2283
85°	1576	1728	1673	1811	1811

Horizontal Angle: 80°
Vertical Angle: 45°
Luminance: 7786 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.5	5.9
10°-20°	175.3	14.6
20°-30°	207.5	17.3
30°-40°	208.6	17.4
40°-50°	191.3	16.0
50°-60°	157.9	13.2
60°-70°	111.7	9.3
70°-80°	59.7	5.0
80°-90°	15.1	1.3
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°	453.4	37.9
0°-40°	661.9	55.3
0°-60°	1011.1	84.4
0°-90°	1197.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1197.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	745	745	745	745	745	
5°	939	878	749	601	555	89
15°	692	877	717	394	345	191
25°	345	510	649	296	276	163
35°	250	307	541	241	227	157
45°	198	220	400	190	192	153
55°	152	160	253	143	155	136
65°	101	104	139	97	110	101
75°	52	54	62	52	58	55
85°	11	12	12	13	13	13
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	745.4	745.4	745.4	745.4	745.4	745.4	745.4	745.4	745.4	745.4	745.4
2.5°	840.2	838.4	829.8	824.2	825.6	813.2	805.6	799.3	795.2	785.2	780.0
5°	939.1	943.9	938.4	935.6	921.4	899.0	878.2	873.7	854.3	830.5	822.2
7.5°	984.7	987.5	984.0	984.0	979.5	959.5	945.0	933.5	900.3	869.6	855.4
10°	937.3	943.6	957.1	963.3	972.3	969.5	966.4	961.9	939.4	903.8	887.5
12.5°	833.2	840.8	867.8	871.6	902.4	932.2	941.8	952.9	955.0	924.9	907.3
15°	692.5	713.6	738.1	749.9	789.0	851.6	877.2	907.3	942.9	930.4	916.6
17.5°	570.4	578.3	604.6	629.5	668.6	740.9	788.3	833.2	909.7	922.1	913.5
20°	469.4	476.6	511.2	509.5	561.4	642.7	690.0	741.9	854.7	895.2	893.4
22.5°	394.3	405.7	425.1	435.8	473.2	545.5	590.4	655.1	792.1	856.1	863.0
25°	345.2	353.5	365.3	374.6	403.6	463.1	510.5	563.8	713.2	804.9	822.2
27.5°	311.6	315.1	326.9	332.4	351.8	403.0	439.6	488.4	640.2	747.5	771.7
30°	285.4	287.8	298.2	299.9	315.1	352.1	387.7	427.5	569.0	688.3	716.0
32.5°	267.0	268.8	276.7	277.4	288.8	315.8	340.7	378.1	501.5	625.0	659.3
35°	250.4	251.5	257.3	259.1	266.3	286.7	307.1	335.9	447.9	567.9	605.6
37.5°	235.9	237.3	240.7	242.8	248.7	264.9	278.8	302.6	396.4	508.5	550.3
40°	221.7	224.1	226.6	226.6	233.1	245.6	257.0	276.7	352.1	456.6	493.6
42.5°	209.6	212.0	213.1	213.4	216.9	228.3	238.0	251.5	318.6	410.6	446.9
45°	197.8	198.9	199.9	200.6	203.0	213.1	220.3	233.1	286.7	368.0	403.3
47.5°	187.1	187.1	187.8	188.9	190.6	197.8	204.1	213.4	259.4	330.0	359.0
50°	176.7	176.7	175.7	176.4	177.4	183.0	189.2	196.8	233.8	295.0	321.0
52.5°	164.3	164.3	164.6	163.6	164.6	169.5	174.3	181.9	212.0	262.9	285.0
55°	151.8	153.2	152.2	151.5	152.9	156.0	159.5	166.0	191.6	237.3	254.9
57.5°	139.4	140.1	139.7	140.8	140.1	142.9	146.0	150.5	173.3	208.6	225.2
60°	127.6	127.6	126.9	127.6	127.6	129.0	131.4	135.9	154.6	184.0	197.8
62.5°	114.5	114.8	115.2	114.8	114.5	116.2	118.3	121.4	138.4	160.1	170.5
65°	101.3	101.7	102.7	102.4	102.0	103.8	104.1	107.6	120.4	139.0	146.7
67.5°	89.6	88.9	89.2	89.9	90.3	90.6	91.3	94.8	103.8	119.0	125.2
70°	75.7	76.4	76.1	77.1	76.4	77.5	78.2	80.6	89.2	99.3	103.4
72.5°	63.3	63.6	63.6	64.7	64.3	65.4	66.1	67.1	73.3	82.3	84.1
75°	51.9	51.9	52.6	52.9	52.9	52.9	53.6	54.3	59.5	65.0	66.8
77.5°	39.4	41.2	40.8	41.2	41.5	42.5	41.9	43.2	46.3	49.5	50.5
80°	28.7	28.7	29.1	29.4	30.1	30.8	30.8	32.2	33.6	35.3	36.3
82.5°	18.3	18.7	19.7	20.1	20.4	21.4	21.4	21.4	23.2	23.9	23.9
85°	11.4	10.7	11.4	11.8	12.1	12.5	12.5	13.1	13.5	13.8	13.8
87.5°	5.5	5.5	5.5	5.5	5.9	5.9	5.9	5.9	6.2	6.2	6.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	745.4	745.4	745.4	745.4	745.4	745.4	745.4	745.4	745.4	745.4	745.4
2.5°	762.7	749.9	730.9	715.3	716.0	701.8	691.4	677.9	673.8	669.6	664.1
5°	778.6	749.2	709.8	678.3	668.6	645.1	615.3	600.8	592.2	576.9	571.1
7.5°	798.3	744.3	684.2	635.0	624.3	585.2	550.0	532.7	516.4	505.7	492.5
10°	811.1	735.7	658.2	593.2	582.8	538.2	492.2	479.7	459.3	446.2	433.7
12.5°	820.8	729.1	631.6	555.8	538.9	495.7	449.3	432.4	417.5	398.5	389.5
15°	829.4	716.7	604.3	516.8	499.1	452.4	409.5	394.3	380.8	364.2	356.3
17.5°	826.3	701.5	574.2	482.2	464.5	418.5	377.4	360.1	351.1	336.5	331.0
20°	822.5	688.3	545.8	449.3	429.9	387.0	346.9	334.5	325.5	316.1	311.3
22.5°	810.4	667.6	517.1	419.2	400.9	358.0	323.7	313.4	306.5	299.9	295.7
25°	790.0	649.2	489.1	389.1	374.6	334.5	305.4	295.7	291.2	284.7	280.9
27.5°	764.8	625.0	461.1	364.6	348.0	312.3	287.4	281.2	276.4	271.2	267.4
30°	732.9	598.0	433.7	340.7	325.5	294.0	272.6	267.0	262.5	257.3	252.8
32.5°	692.5	570.7	408.1	318.6	305.8	278.4	258.7	254.2	250.4	244.2	241.8
35°	647.2	541.3	382.9	297.5	285.4	261.5	245.2	240.7	236.9	231.7	229.7
37.5°	601.1	506.4	358.0	279.5	268.8	247.3	231.7	227.2	223.8	219.3	218.3
40°	552.4	474.2	333.4	261.1	251.8	233.5	218.3	214.8	211.3	208.6	207.9
42.5°	503.3	437.2	312.0	245.9	235.9	218.9	205.1	201.3	199.2	197.8	198.2
45°	456.9	400.2	289.9	228.3	221.4	205.8	193.0	189.9	188.2	187.1	188.5
47.5°	406.8	362.5	269.1	213.4	206.5	192.7	180.6	177.8	177.1	176.7	179.2
50°	362.5	323.4	246.6	198.2	192.3	178.1	168.4	166.0	165.3	166.4	169.8
52.5°	320.6	287.1	226.2	184.0	178.1	165.3	156.3	154.6	154.3	156.7	160.1
55°	279.1	253.2	204.1	168.4	162.6	151.5	144.6	142.9	142.5	147.3	150.5
57.5°	243.8	220.3	183.3	153.6	149.1	138.7	132.5	131.1	132.1	136.6	139.7
60°	209.3	190.2	164.3	137.7	134.2	125.2	120.4	120.0	121.1	126.2	129.4
62.5°	178.1	163.6	143.9	123.1	120.7	112.8	108.3	109.0	110.0	115.2	117.9
65°	151.5	138.7	123.8	108.6	105.5	100.0	96.8	97.2	99.3	103.8	106.5
67.5°	125.6	115.2	106.9	94.8	92.4	87.5	85.1	86.5	87.5	92.0	94.8
70°	103.8	95.5	89.2	80.2	78.5	74.4	72.6	74.4	75.4	79.2	82.7
72.5°	83.4	78.2	73.3	66.8	65.0	62.3	61.9	62.6	64.3	68.1	69.5
75°	64.7	61.9	57.8	53.6	52.6	51.2	50.8	51.5	53.3	55.3	56.7
77.5°	49.1	46.7	43.6	41.9	40.5	39.8	40.1	41.2	41.9	43.9	45.0
80°	35.6	32.9	32.2	29.7	29.4	29.1	29.7	30.1	31.1	32.5	33.2
82.5°	23.5	21.4	20.8	20.4	20.1	19.7	20.8	21.1	21.8	22.8	23.2
85°	12.8	12.1	12.1	11.8	12.1	12.8	12.8	13.1	13.1	13.5	13.1
87.5°	5.9	5.2	5.5	5.5	5.5	5.9	5.9	6.2	6.2	6.2	5.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	745.4	745.4	745.4
2.5°	663.8	661.3	651.6
5°	565.9	557.6	554.8
7.5°	491.2	490.5	475.9
10°	427.9	428.9	415.8
12.5°	388.1	379.4	378.4
15°	354.2	346.2	344.8
17.5°	328.9	324.1	322.7
20°	309.9	307.1	304.7
22.5°	294.7	291.2	289.2
25°	279.5	276.4	275.7
27.5°	266.3	262.5	262.5
30°	252.8	250.4	249.4
32.5°	240.7	238.7	238.7
35°	229.0	227.9	226.6
37.5°	218.3	218.3	217.6
40°	207.9	208.9	208.9
42.5°	198.9	199.9	199.9
45°	189.2	190.9	191.6
47.5°	179.5	182.3	183.0
50°	170.9	172.9	173.3
52.5°	161.5	163.9	165.7
55°	151.8	154.3	155.3
57.5°	141.5	143.9	144.2
60°	130.1	132.5	133.2
62.5°	119.7	121.1	121.8
65°	106.9	109.0	110.3
67.5°	95.1	96.8	96.8
70°	82.3	83.0	84.1
72.5°	70.2	70.6	70.6
75°	57.1	57.8	58.1
77.5°	45.0	45.3	45.3
80°	33.2	32.9	32.9
82.5°	23.2	22.1	22.1
85°	13.1	12.8	13.1
87.5°	5.9	5.9	5.9
90°	0.0	0.0	0.0

(END OF REPORT)