

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



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055381

Luminaire Tested: S122R3DR-H675D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055381
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H675D940-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

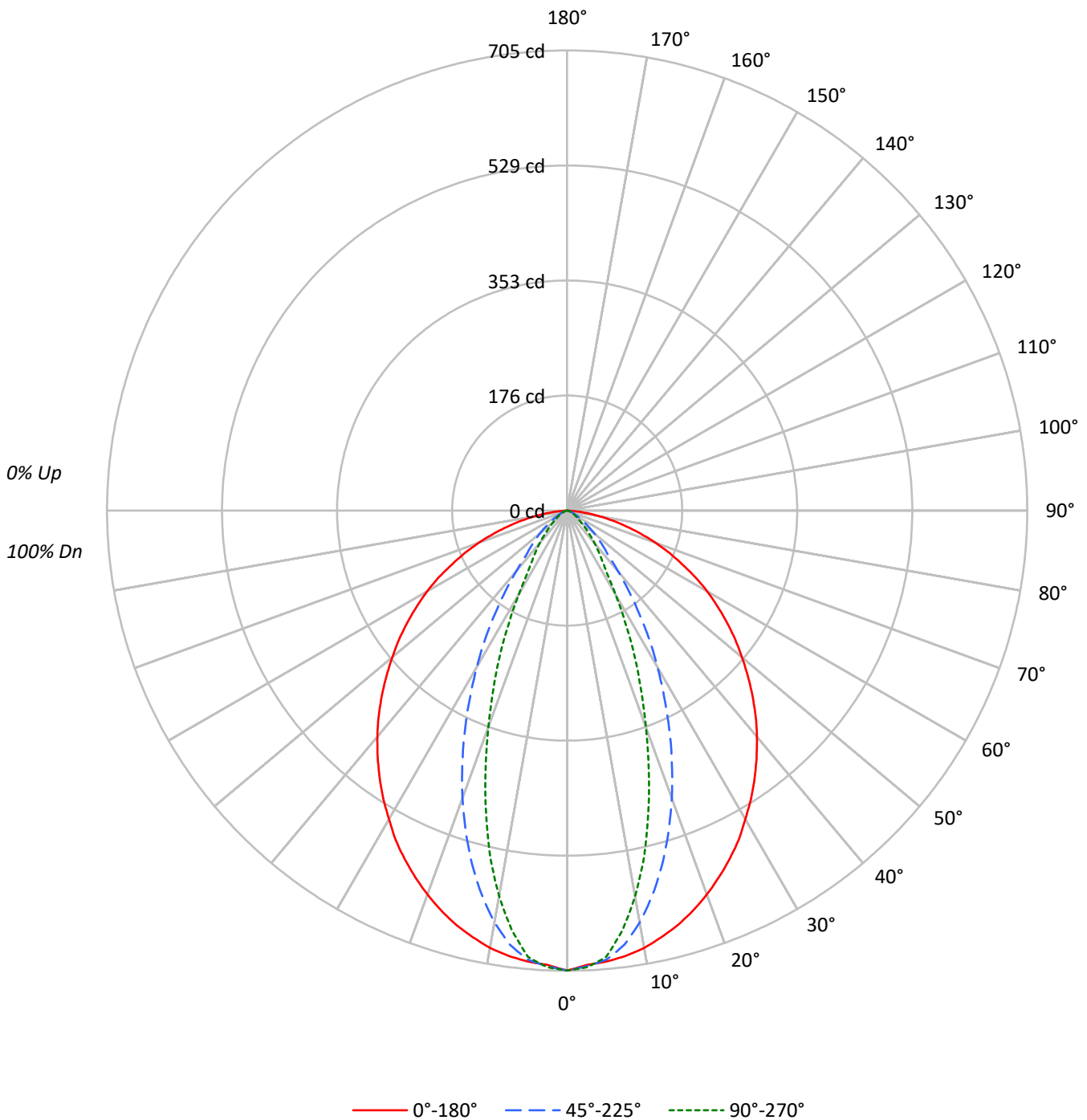
Lumens per Lamp: N/A
Luminaire Lumens: 807.5 lumens
Efficiency: N/A
Efficacy: 33.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (A_{in}): 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	
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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13349	13349	13349
5°	13187	13138	13056
10°	13090	12326	11545
15°	12888	11025	9417
20°	12621	9454	7103
25°	12311	7743	5071
30°	11938	6045	3231
35°	11583	4434	2158
40°	11191	2990	1622
45°	10758	2106	1157
50°	10307	1603	813
55°	9870	1113	598
60°	9390	754	493
65°	8710	542	386
70°	7938	432	332
75°	6888	381	256
80°	5466	284	284
85°	3000	370	196

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10758 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.4	8.0
10°-20°	158.1	19.6
20°-30°	180.6	22.4
30°-40°	153.2	19.0
40°-50°	114.3	14.2
50°-60°	73.9	9.1
60°-70°	41.2	5.1
70°-80°	18.1	2.2
80°-90°	3.8	0.5
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°	403.2	49.9
0°-40°	556.3	68.9
0°-60°	744.5	92.2
0°-90°	807.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	807.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	705	705	705	705	705	
5°	693	702	691	684	686	66
15°	657	641	562	503	480	185
25°	589	520	370	271	243	271
35°	501	377	192	104	93	313
45°	402	238	79	51	43	310
55°	299	113	34	21	18	267
65°	194	41	12	10	9	193
75°	94	9	5	4	4	100
85°	14	1	2	1	1	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	704.6	704.6	704.6	704.6	704.6
2.5°	696.8	707.2	698.6	698.6	700.3
5°	693.4	702.0	690.8	683.9	686.5
7.5°	688.2	694.3	670.9	650.2	648.5
10°	680.4	683.0	640.7	608.8	600.1
12.5°	669.2	663.2	603.6	558.7	544.0
15°	657.1	640.7	562.1	502.6	480.1
17.5°	642.4	613.1	516.4	443.8	416.2
20°	626.0	584.6	468.9	382.5	352.3
22.5°	607.9	552.6	419.7	324.7	294.5
25°	588.9	519.8	370.4	271.1	242.6
27.5°	569.1	485.3	322.1	222.8	191.7
30°	545.7	449.9	276.3	176.2	147.7
32.5°	524.1	412.8	234.0	136.4	112.3
35°	500.8	377.4	191.7	104.5	93.3
37.5°	476.7	341.9	154.6	88.1	78.6
40°	452.5	306.5	120.9	74.3	65.6
42.5°	427.4	272.0	93.3	62.2	53.5
45°	401.5	238.3	78.6	50.9	43.2
47.5°	375.6	204.7	65.6	40.6	34.5
50°	349.7	172.7	54.4	31.9	27.6
52.5°	324.7	142.5	43.2	25.9	22.5
55°	298.8	113.1	33.7	20.7	18.1
57.5°	272.9	88.1	25.9	17.3	15.5
60°	247.8	66.5	19.9	13.8	13.0
62.5°	221.9	53.5	15.5	11.2	10.4
65°	194.3	41.4	12.1	9.5	8.6
67.5°	169.2	30.2	9.5	7.8	6.9
70°	143.3	20.7	7.8	6.9	6.0
72.5°	118.3	13.0	6.0	5.2	5.2
75°	94.1	8.6	5.2	4.3	3.5
77.5°	71.7	5.2	3.5	3.5	2.6
80°	50.1	3.5	2.6	2.6	2.6
82.5°	31.1	2.6	1.7	1.7	1.7
85°	13.8	0.9	1.7	0.9	0.9
87.5°	2.6	0.9	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	17.26	18.58	17.62	18.89	19.20	3.57	4.89	3.94	5.20	5.52
	3H	19.72	20.90	20.10	21.23	21.59	4.42	5.59	4.80	5.92	6.28
	4H	20.68	21.77	21.08	22.12	22.51	4.70	5.79	5.10	6.14	6.52
	6H	21.37	22.37	21.78	22.74	23.14	4.89	5.89	5.30	6.26	6.66
	8H	21.56	22.51	21.99	22.91	23.31	4.96	5.91	5.39	6.30	6.71
	12H	21.65	22.55	22.08	22.94	23.37	4.99	5.90	5.42	6.28	6.71
4H	2H	17.04	18.13	17.44	18.48	18.87	4.14	5.24	4.55	5.59	5.97
	3H	19.52	20.42	19.94	20.82	21.23	5.17	6.07	5.58	6.47	6.87
	4H	20.47	21.27	20.90	21.69	22.13	5.54	6.34	5.98	6.76	7.20
	6H	21.22	21.91	21.69	22.36	22.83	5.84	6.53	6.30	6.97	7.44
	8H	21.47	22.11	21.94	22.56	23.03	5.93	6.58	6.40	7.02	7.50
	12H	21.60	22.16	22.08	22.65	23.12	5.98	6.55	6.47	7.03	7.51
8H	4H	20.33	20.98	20.80	21.43	21.90	5.91	6.56	6.38	7.01	7.48
	6H	21.07	21.60	21.58	22.10	22.58	6.28	6.80	6.78	7.30	7.78
	8H	21.32	21.79	21.84	22.31	22.80	6.41	6.88	6.94	7.40	7.89
	12H	21.47	21.88	21.98	22.38	22.95	6.50	6.91	7.02	7.41	7.98
12H	4H	20.29	20.86	20.78	21.34	21.82	6.04	6.61	6.52	7.09	7.56
	6H	21.01	21.48	21.54	22.00	22.49	6.40	6.87	6.92	7.38	7.88
	8H	21.28	21.69	21.79	22.19	22.76	6.57	6.99	7.09	7.48	8.05