

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: P1055360

Luminaire Tested: S122R3DR-H675D830-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055360
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-H675D830-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

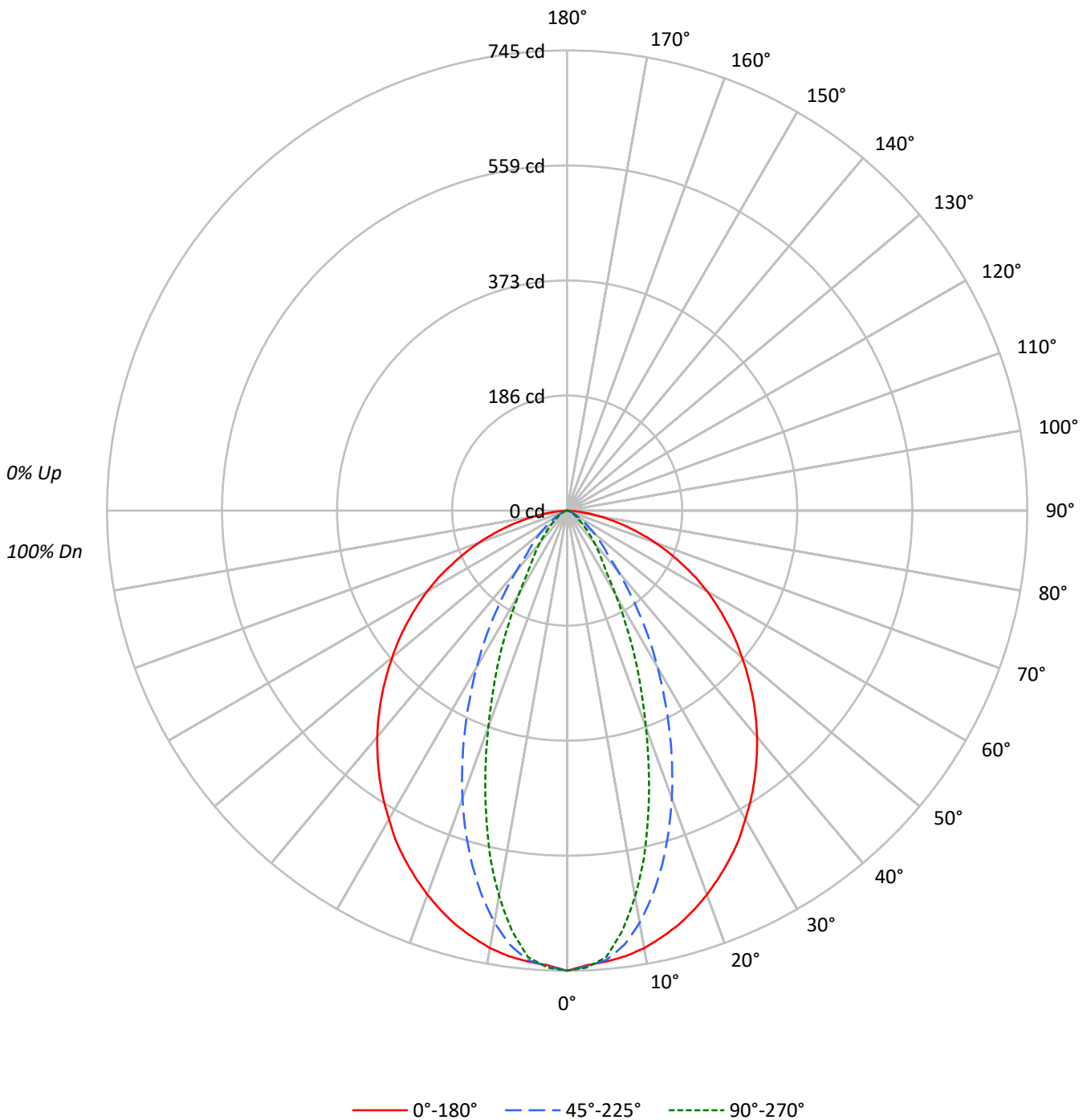
Lumens per Lamp: N/A
Luminaire Lumens: 853.5 lumens
Efficiency: N/A
Efficacy: 35.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	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					100			
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71					71			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58					58			
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53					53			
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49					49			
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45					45			
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42					42			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39					39			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14111	14111	14111
5°	13938	13887	13800
10°	13836	13028	12203
15°	13624	11655	9954
20°	13341	9992	7508
25°	13013	8186	5362
30°	12619	6390	3415
35°	12244	4686	2280
40°	11829	3161	1716
45°	11371	2227	1222
50°	10897	1695	861
55°	10431	1176	634
60°	9928	796	519
65°	9208	574	408
70°	8392	454	355
75°	7284	403	271
80°	5772	295	295
85°	3174	391	196

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11371 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.1	8.0
10°-20°	167.1	19.6
20°-30°	190.9	22.4
30°-40°	161.9	19.0
40°-50°	120.8	14.2
50°-60°	78.1	9.1
60°-70°	43.5	5.1
70°-80°	19.1	2.2
80°-90°	3.9	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°	426.2	49.9
0°-40°	588.1	68.9
0°-60°	787.0	92.2
0°-90°	853.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	853.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	745	745	745	745	745	
5°	733	742	730	723	726	70
15°	695	677	594	531	508	196
25°	622	550	392	287	256	287
35°	529	399	203	110	99	331
45°	424	252	83	54	46	327
55°	316	120	36	22	19	282
65°	205	44	13	10	9	204
75°	100	9	6	5	4	106
85°	15	1	2	1	1	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	744.8	744.8	744.8	744.8	744.8
2.5°	736.6	747.5	738.4	738.4	740.2
5°	732.9	742.0	730.2	722.9	725.6
7.5°	727.4	733.8	709.2	687.3	685.5
10°	719.2	722.0	677.2	643.5	634.3
12.5°	707.4	701.0	638.0	590.5	575.0
15°	694.6	677.2	594.2	531.2	507.5
17.5°	679.1	648.0	545.8	469.1	439.9
20°	661.7	617.9	495.6	404.3	372.4
22.5°	642.6	584.1	443.6	343.2	311.2
25°	622.5	549.5	391.6	286.6	256.5
27.5°	601.5	513.0	340.4	235.5	202.6
30°	576.8	475.5	292.1	186.2	156.1
32.5°	554.0	436.3	247.3	144.2	118.7
35°	529.4	398.9	202.6	110.4	98.6
37.5°	503.8	361.4	163.4	93.1	83.1
40°	478.3	324.0	127.8	78.5	69.4
42.5°	451.8	287.5	98.6	65.7	56.6
45°	424.4	251.9	83.1	53.9	45.6
47.5°	397.0	216.3	69.4	42.9	36.5
50°	369.7	182.5	57.5	33.8	29.2
52.5°	343.2	150.6	45.6	27.4	23.7
55°	315.8	119.6	35.6	21.9	19.2
57.5°	288.4	93.1	27.4	18.3	16.4
60°	262.0	70.3	21.0	14.6	13.7
62.5°	234.6	56.6	16.4	11.9	11.0
65°	205.4	43.8	12.8	10.0	9.1
67.5°	178.9	31.9	10.0	8.2	7.3
70°	151.5	21.9	8.2	7.3	6.4
72.5°	125.0	13.7	6.4	5.5	5.5
75°	99.5	9.1	5.5	4.6	3.7
77.5°	75.8	5.5	3.7	3.7	2.7
80°	52.9	3.7	2.7	2.7	2.7
82.5°	32.9	2.7	1.8	1.8	1.8
85°	14.6	0.9	1.8	0.9	0.9
87.5°	2.7	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	17.45	18.77	17.81	19.08	19.40	3.77	5.09	4.13	5.40	5.72
	3H	19.92	21.09	20.30	21.42	21.78	4.62	5.79	5.00	6.12	6.48
	4H	20.87	21.96	21.28	22.32	22.70	4.90	5.99	5.30	6.34	6.72
	6H	21.56	22.56	21.98	22.93	23.33	5.08	6.09	5.50	6.46	6.85
	8H	21.76	22.71	22.19	23.10	23.50	5.15	6.10	5.58	6.49	6.90
	12H	21.84	22.75	22.27	23.13	23.56	5.18	6.08	5.61	6.47	6.90
4H	2H	17.23	18.32	17.64	18.68	19.06	4.34	5.43	4.74	5.78	6.17
	3H	19.72	20.61	20.13	21.02	21.42	5.37	6.26	5.78	6.67	7.07
	4H	20.66	21.46	21.09	21.88	22.32	5.74	6.54	6.18	6.96	7.41
	6H	21.42	22.11	21.88	22.55	23.02	6.03	6.72	6.49	7.17	7.63
	8H	21.66	22.30	22.13	22.75	23.22	6.12	6.77	6.59	7.22	7.69
	12H	21.79	22.36	22.27	22.84	23.31	6.17	6.74	6.65	7.22	7.69
8H	4H	20.53	21.17	21.00	21.62	22.09	6.12	6.76	6.59	7.21	7.68
	6H	21.27	21.79	21.77	22.29	22.77	6.47	6.99	6.97	7.49	7.97
	8H	21.51	21.98	22.03	22.50	22.99	6.60	7.07	7.12	7.59	8.08
	12H	21.66	22.08	22.18	22.57	23.14	6.68	7.10	7.20	7.59	8.16
12H	4H	20.48	21.05	20.97	21.53	22.01	6.24	6.81	6.72	7.29	7.76
	6H	21.21	21.68	21.73	22.19	22.68	6.59	7.06	7.11	7.57	8.07
	8H	21.47	21.88	21.99	22.38	22.95	6.76	7.17	7.28	7.67	8.24