

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: P1055379

Luminaire Tested: S122R3DR-H675D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055379
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H675D935-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

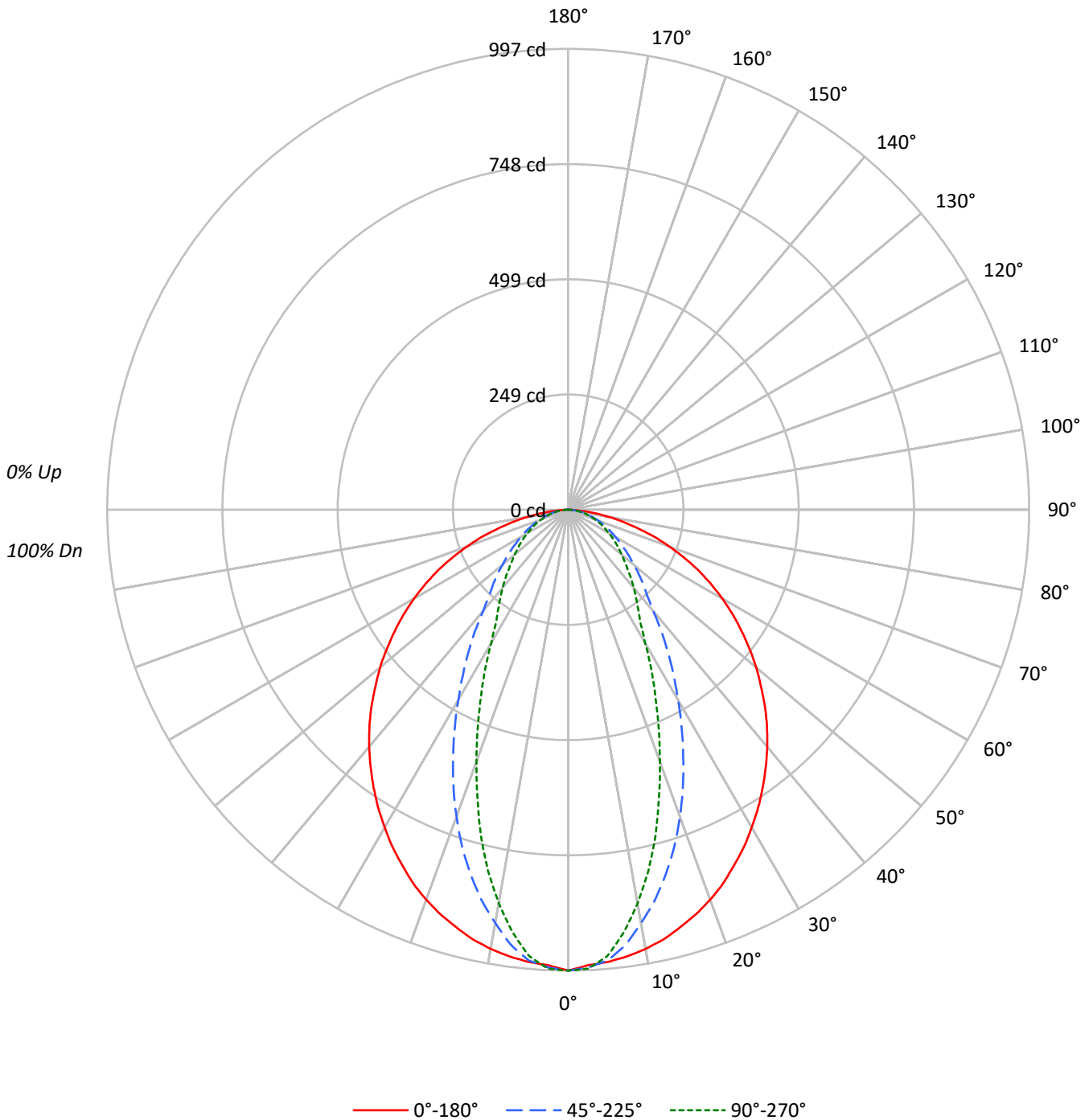
Lumens per Lamp: N/A
Luminaire Lumens: 1508.3 lumens
Efficiency: N/A
Efficacy: 63.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (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	
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	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18893	18893	18893
5°	18680	18615	18442
10°	18559	17468	16633
15°	18349	16011	14309
20°	18105	14238	11684
25°	17744	12304	9325
30°	17364	10396	7278
35°	16969	8696	6113
40°	16558	7051	5444
45°	16130	6165	4871
50°	15654	5456	4448
55°	15118	4928	4132
60°	14596	4486	3854
65°	13906	4111	3627
70°	12885	3833	3418
75°	11412	3477	3235
80°	9732	3273	3000
85°	6695	2891	2717

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16130 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.4	6.1
10°-20°	230.7	15.3
20°-30°	284.3	18.8
30°-40°	272.7	18.1
40°-50°	235.3	15.6
50°-60°	182.5	12.1
60°-70°	125.0	8.3
70°-80°	67.9	4.5
80°-90°	18.6	1.2
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°	606.4	40.2
0°-40°	879.1	58.3
0°-60°	1296.9	86.0
0°-90°	1508.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1508.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	997	997	997	997	997	
5°	982	996	979	966	970	93
15°	936	907	816	750	730	264
25°	849	758	589	480	446	391
35°	734	582	376	280	264	459
45°	602	405	230	190	182	464
55°	458	244	149	129	125	410
65°	310	133	92	83	81	306
75°	156	61	48	45	44	167
85°	31	15	13	13	12	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	997.2	997.2	997.2	997.2	997.2
2.5°	986.3	1003.0	991.3	991.3	993.8
5°	982.2	996.3	978.8	966.3	969.7
7.5°	974.7	984.7	949.7	923.0	922.1
10°	964.7	965.5	908.0	873.0	864.6
12.5°	952.2	938.8	865.4	812.9	800.4
15°	935.5	907.1	816.3	749.6	729.5
17.5°	918.0	874.6	763.7	680.4	652.8
20°	898.0	835.4	706.2	611.1	579.5
22.5°	875.5	797.9	648.7	544.4	511.1
25°	848.8	757.9	588.6	480.2	446.1
27.5°	822.9	717.0	531.1	423.6	388.5
30°	793.7	672.8	475.2	369.4	332.7
32.5°	764.6	627.8	423.6	317.7	290.2
35°	733.7	582.0	376.0	280.1	264.3
37.5°	702.0	536.9	331.0	255.1	241.0
40°	669.5	491.9	285.1	231.0	220.1
42.5°	636.2	447.7	253.5	210.9	200.9
45°	602.0	405.2	230.1	190.1	181.8
47.5°	565.3	362.7	207.6	172.6	165.1
50°	531.1	321.8	185.1	156.7	150.9
52.5°	494.4	281.8	166.8	142.6	137.6
55°	457.7	243.5	149.2	129.2	125.1
57.5°	421.9	206.8	132.6	116.7	113.4
60°	385.2	177.6	118.4	105.1	101.7
62.5°	347.7	154.2	105.1	94.2	90.9
65°	310.2	132.6	91.7	83.4	80.9
67.5°	271.0	111.7	80.0	73.4	71.7
70°	232.6	93.4	69.2	63.4	61.7
72.5°	195.1	75.9	58.4	54.2	52.5
75°	155.9	60.9	47.5	45.0	44.2
77.5°	121.7	47.5	38.4	36.7	35.9
80°	89.2	35.0	30.0	28.3	27.5
82.5°	59.2	24.2	21.7	20.8	20.0
85°	30.8	15.0	13.3	13.3	12.5
87.5°	10.0	6.7	6.7	6.7	5.8
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	19.82	21.29	20.18	21.60	21.92	14.62	16.09	14.99	16.41	16.72
	3H	22.15	23.47	22.53	23.79	24.16	16.27	17.59	16.65	17.92	18.28
	4H	23.04	24.28	23.45	24.63	25.01	16.91	18.14	17.31	18.49	18.87
	6H	23.71	24.85	24.12	25.21	25.61	17.40	18.54	17.81	18.91	19.30
	8H	23.91	25.00	24.34	25.39	25.79	17.57	18.66	18.00	19.05	19.45
	12H	24.03	25.07	24.46	25.45	25.88	17.69	18.73	18.12	19.11	19.54
4H	2H	19.84	21.07	20.24	21.42	21.80	15.34	16.57	15.74	16.92	17.30
	3H	22.25	23.27	22.66	23.67	24.08	17.19	18.21	17.60	18.61	19.02
	4H	23.18	24.10	23.61	24.52	24.96	17.94	18.86	18.37	19.27	19.71
	6H	23.96	24.76	24.41	25.20	25.66	18.55	19.35	19.01	19.80	20.26
	8H	24.23	24.97	24.69	25.42	25.89	18.77	19.52	19.23	19.96	20.43
	12H	24.40	25.07	24.89	25.55	26.02	18.93	19.60	19.41	20.07	20.55
8H	4H	23.17	23.92	23.64	24.36	24.83	18.31	19.06	18.78	19.51	19.98
	6H	23.98	24.60	24.48	25.09	25.57	19.05	19.67	19.55	20.16	20.64
	8H	24.28	24.83	24.80	25.34	25.83	19.35	19.90	19.86	20.41	20.90
	12H	24.51	25.00	25.02	25.49	26.06	19.59	20.08	20.10	20.57	21.14
12H	4H	23.15	23.82	23.63	24.30	24.77	18.37	19.04	18.85	19.52	19.99
	6H	23.95	24.51	24.47	25.02	25.51	19.14	19.69	19.65	20.20	20.69
	8H	24.29	24.78	24.80	25.27	25.84	19.49	19.98	20.00	20.47	21.04