

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: P1055385

Luminaire Tested: S122R3DR-H675D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055385
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-H675D950-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

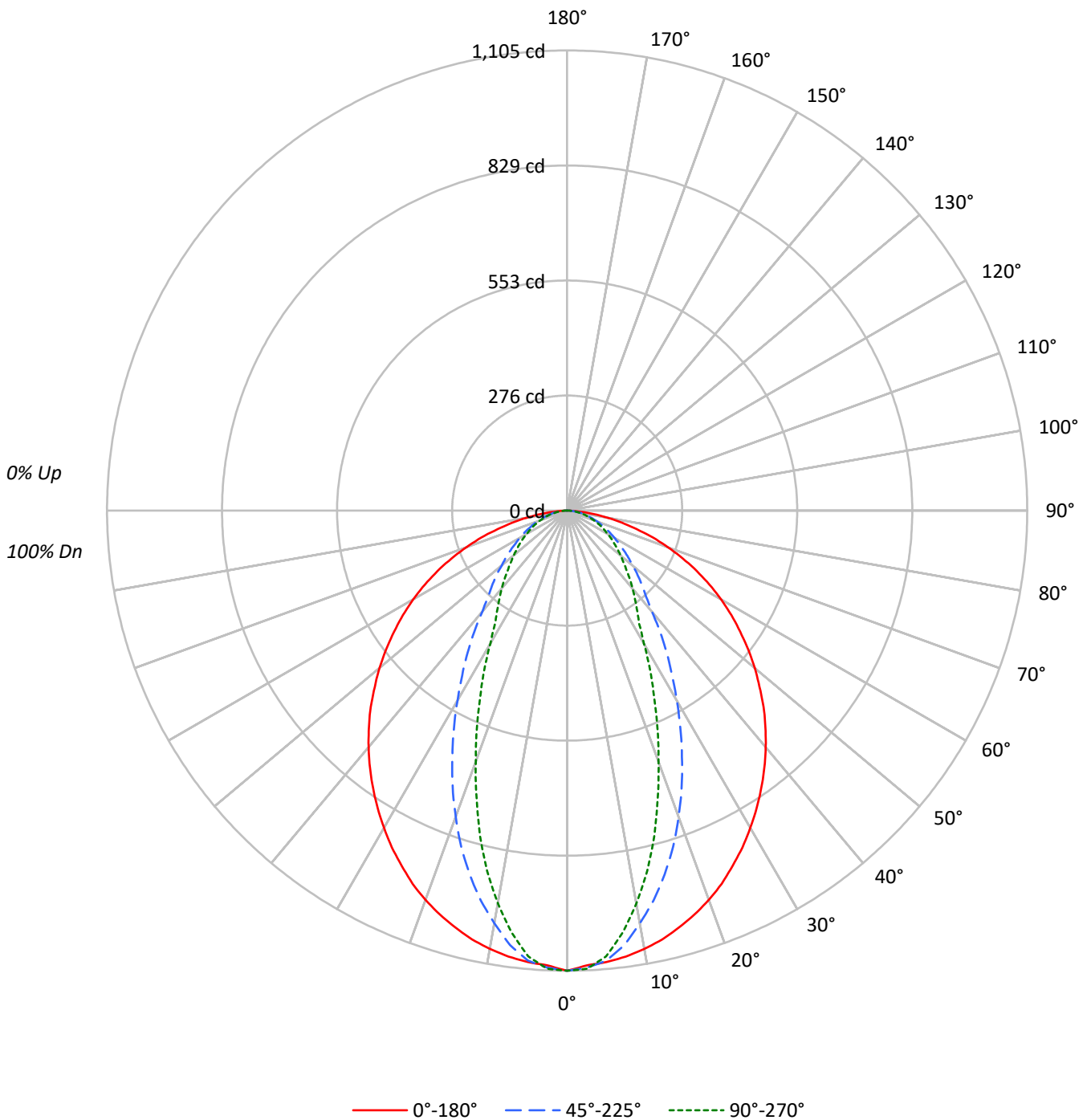
Lumens per Lamp: N/A
Luminaire Lumens: 1671.2 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87					87			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75					75			
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66					66			
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58					58			
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52					52			
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46					46			
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42					42			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38					38			
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35					35			
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32					32			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20933	20933	20933
5°	20698	20627	20433
10°	20564	19354	18430
15°	20330	17739	15854
20°	20061	15777	12946
25°	19661	13634	10331
30°	19241	11520	8064
35°	18804	9635	6774
40°	18346	7813	6032
45°	17871	6832	5396
50°	17346	6045	4928
55°	16753	5463	4578
60°	16172	4971	4270
65°	15408	4555	4017
70°	14275	4249	3789
75°	12649	3858	3587
80°	10780	3633	3328
85°	7434	3217	3022

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17871 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.2	6.1
10°-20°	255.6	15.3
20°-30°	315.0	18.8
30°-40°	302.2	18.1
40°-50°	260.7	15.6
50°-60°	202.2	12.1
60°-70°	138.5	8.3
70°-80°	75.2	4.5
80°-90°	20.6	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°	671.9	40.2
0°-40°	974.1	58.3
0°-60°	1437.0	86.0
0°-90°	1671.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1671.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1105	1105	1105	1105	1105	
5°	1088	1104	1085	1071	1074	103
15°	1036	1005	904	830	808	292
25°	940	840	652	532	494	433
35°	813	645	417	310	293	509
45°	667	449	255	211	201	514
55°	507	270	165	143	139	454
65°	344	147	102	92	90	339
75°	173	67	53	50	49	185
85°	34	17	15	15	14	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1104.9	1104.9	1104.9	1104.9	1104.9
2.5°	1092.9	1111.4	1098.4	1098.4	1101.2
5°	1088.3	1104.0	1084.6	1070.7	1074.4
7.5°	1080.0	1091.0	1052.2	1022.7	1021.8
10°	1068.9	1069.8	1006.0	967.2	958.0
12.5°	1055.0	1040.2	958.9	900.7	886.9
15°	1036.5	1005.1	904.4	830.5	808.3
17.5°	1017.1	969.1	846.2	753.8	723.4
20°	995.0	925.7	782.5	677.2	642.1
22.5°	970.0	884.1	718.7	603.3	566.3
25°	940.5	839.8	652.2	532.1	494.2
27.5°	911.8	794.5	588.5	469.3	430.5
30°	879.5	745.5	526.6	409.3	368.6
32.5°	847.1	695.6	469.3	352.0	321.5
35°	813.0	644.8	416.6	310.4	292.9
37.5°	777.9	594.9	366.8	282.7	267.0
40°	741.8	545.1	315.9	255.9	243.9
42.5°	704.9	496.1	280.8	233.7	222.6
45°	667.0	449.0	255.0	210.6	201.4
47.5°	626.4	401.9	230.0	191.2	182.9
50°	588.5	356.6	205.1	173.7	167.2
52.5°	547.8	312.3	184.8	158.0	152.4
55°	507.2	269.8	165.4	143.2	138.6
57.5°	467.5	229.1	146.9	129.3	125.6
60°	426.8	196.8	131.2	116.4	112.7
62.5°	385.2	170.9	116.4	104.4	100.7
65°	343.7	146.9	101.6	92.4	89.6
67.5°	300.2	123.8	88.7	81.3	79.4
70°	257.7	103.5	76.7	70.2	68.4
72.5°	216.2	84.1	64.7	60.0	58.2
75°	172.8	67.4	52.7	49.9	49.0
77.5°	134.9	52.7	42.5	40.6	39.7
80°	98.8	38.8	33.3	31.4	30.5
82.5°	65.6	26.8	24.0	23.1	22.2
85°	34.2	16.6	14.8	14.8	13.9
87.5°	11.1	7.4	7.4	7.4	6.5
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	20.18	21.64	20.54	21.96	22.27	14.98	16.45	15.34	16.76	17.08
	3H	22.50	23.82	22.88	24.15	24.51	16.63	17.94	17.01	18.27	18.63
	4H	23.40	24.64	23.80	24.98	25.36	17.26	18.50	17.66	18.85	19.23
	6H	24.06	25.20	24.48	25.57	25.96	17.76	18.90	18.17	19.26	19.66
	8H	24.27	25.36	24.70	25.75	26.15	17.93	19.01	18.35	19.40	19.80
	12H	24.39	25.42	24.82	25.81	26.24	18.04	19.08	18.47	19.46	19.89
4H	2H	20.19	21.43	20.59	21.78	22.16	15.69	16.93	16.10	17.28	17.66
	3H	22.60	23.63	23.01	24.03	24.43	17.54	18.57	17.95	18.97	19.37
	4H	23.53	24.46	23.97	24.87	25.31	18.29	19.21	18.72	19.63	20.07
	6H	24.31	25.11	24.77	25.56	26.02	18.91	19.71	19.36	20.15	20.61
	8H	24.58	25.33	25.05	25.78	26.24	19.12	19.87	19.59	20.32	20.78
	12H	24.76	25.43	25.24	25.91	26.38	19.28	19.95	19.77	20.43	20.90
8H	4H	23.53	24.28	23.99	24.72	25.19	18.67	19.42	19.13	19.86	20.33
	6H	24.33	24.95	24.83	25.44	25.92	19.41	20.03	19.91	20.52	21.00
	8H	24.64	25.19	25.15	25.70	26.19	19.70	20.26	20.22	20.77	21.26
	12H	24.87	25.36	25.38	25.85	26.41	19.95	20.44	20.46	20.93	21.50
12H	4H	23.51	24.18	23.99	24.65	25.13	18.73	19.40	19.21	19.87	20.35
	6H	24.31	24.86	24.83	25.38	25.86	19.49	20.05	20.01	20.56	21.05
	8H	24.64	25.13	25.16	25.63	26.19	19.85	20.34	20.36	20.83	21.40