

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: P1055301

Luminaire Tested: S122R3DR-H1005D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055301
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-H1005D940-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

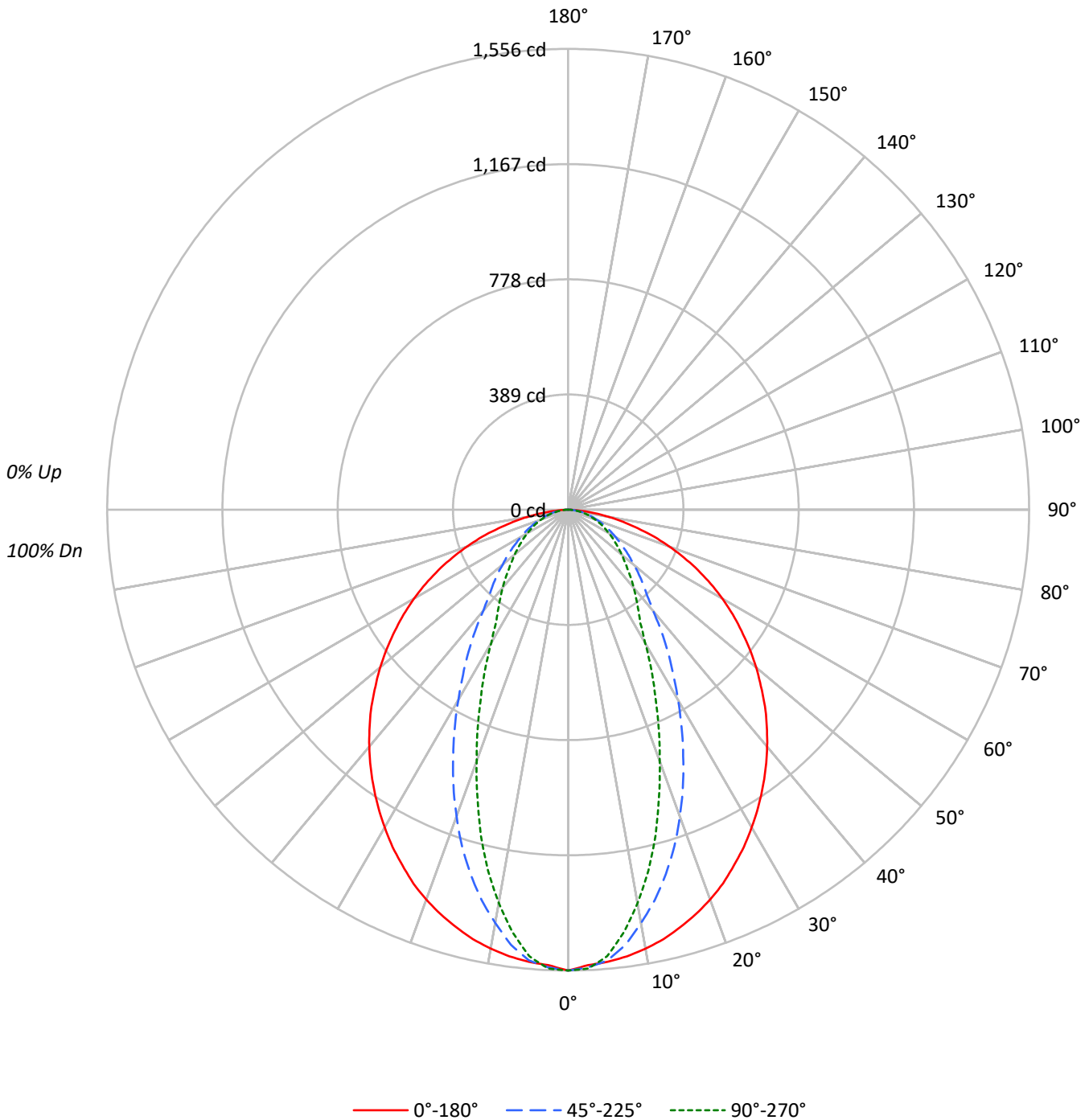
Lumens per Lamp: N/A
Luminaire Lumens: 2353.3 lumens
Efficiency: N/A
Efficacy: 64.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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	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°	29478	29478	29478
5°	29145	29047	28773
10°	28955	27255	25952
15°	28629	24981	22327
20°	28249	22216	18228
25°	27684	19199	14549
30°	27094	16222	11356
35°	26478	13570	9538
40°	25835	11003	8493
45°	25167	9619	7599
50°	24426	8512	6941
55°	23591	7693	6444
60°	22773	6999	6013
65°	21693	6415	5658
70°	20108	5983	5334
75°	17810	5432	5044
80°	15187	5106	4681
85°	10456	4521	4239

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 25167 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.6	6.1
10°-20°	360.0	15.3
20°-30°	443.6	18.8
30°-40°	425.6	18.1
40°-50°	367.1	15.6
50°-60°	284.8	12.1
60°-70°	195.0	8.3
70°-80°	105.9	4.5
80°-90°	29.0	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°	946.1	40.2
0°-40°	1371.7	58.3
0°-60°	2023.5	86.0
0°-90°	2353.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2353.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1556	1556	1556	1556	1556	
5°	1532	1555	1527	1508	1513	145
15°	1460	1415	1274	1170	1138	412
25°	1324	1182	918	749	696	610
35°	1145	908	587	437	412	716
45°	939	632	359	297	284	724
55°	714	380	233	202	195	639
65°	484	207	143	130	126	478
75°	243	95	74	70	69	261
85°	48	23	21	21	20	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1555.9	1555.9	1555.9	1555.9	1555.9
2.5°	1539.0	1565.0	1546.8	1546.8	1550.7
5°	1532.5	1554.6	1527.3	1507.7	1512.9
7.5°	1520.8	1536.4	1481.7	1440.1	1438.8
10°	1505.1	1506.4	1416.7	1362.0	1349.0
12.5°	1485.6	1464.8	1350.3	1268.4	1248.9
15°	1459.6	1415.4	1273.6	1169.5	1138.3
17.5°	1432.3	1364.6	1191.6	1061.5	1018.6
20°	1401.1	1303.5	1101.9	953.6	904.1
22.5°	1365.9	1245.0	1012.1	849.5	797.5
25°	1324.3	1182.5	918.4	749.3	696.0
27.5°	1284.0	1118.8	828.7	660.9	606.2
30°	1238.5	1049.8	741.5	576.3	519.1
32.5°	1192.9	979.6	660.9	495.6	452.7
35°	1144.8	908.0	586.7	437.1	412.4
37.5°	1095.4	837.8	516.5	398.1	376.0
40°	1044.6	767.5	444.9	360.3	343.4
42.5°	992.6	698.6	395.5	329.1	313.5
45°	939.3	632.2	359.0	296.6	283.6
47.5°	882.0	565.9	323.9	269.3	257.6
50°	828.7	502.1	288.8	244.6	235.5
52.5°	771.4	439.7	260.2	222.5	214.6
55°	714.2	379.9	232.9	201.6	195.1
57.5°	658.3	322.6	206.8	182.1	176.9
60°	601.0	277.1	184.7	163.9	158.7
62.5°	542.5	240.7	163.9	147.0	141.8
65°	483.9	206.8	143.1	130.1	126.2
67.5°	422.8	174.3	124.9	114.5	111.9
70°	363.0	145.7	108.0	98.9	96.3
72.5°	304.4	118.4	91.1	84.6	82.0
75°	243.3	95.0	74.2	70.2	68.9
77.5°	189.9	74.2	59.8	57.2	55.9
80°	139.2	54.6	46.8	44.2	42.9
82.5°	92.4	37.7	33.8	32.5	31.2
85°	48.1	23.4	20.8	20.8	19.5
87.5°	15.6	10.4	10.4	10.4	9.1
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	21.36	22.83	21.73	23.15	23.46	16.17	17.64	16.53	17.95	18.27
	3H	23.69	25.01	24.07	25.34	25.70	17.82	19.13	18.20	19.46	19.83
	4H	24.59	25.82	24.99	26.17	26.55	18.45	19.69	18.85	20.04	20.42
	6H	25.25	26.39	25.67	26.76	27.15	18.95	20.09	19.36	20.45	20.85
	8H	25.46	26.54	25.89	26.93	27.34	19.12	20.20	19.54	20.59	20.99
	12H	25.58	26.61	26.01	27.00	27.43	19.23	20.27	19.66	20.65	21.08
4H	2H	21.38	22.62	21.78	22.96	23.34	16.89	18.12	17.29	18.47	18.85
	3H	23.79	24.82	24.20	25.22	25.62	18.73	19.76	19.15	20.16	20.56
	4H	24.72	25.65	25.16	26.06	26.50	19.48	20.40	19.91	20.82	21.26
	6H	25.50	26.30	25.96	26.75	27.21	20.09	20.90	20.55	21.34	21.80
	8H	25.77	26.52	26.24	26.97	27.43	20.31	21.06	20.78	21.50	21.97
	12H	25.95	26.62	26.43	27.10	27.57	20.47	21.14	20.96	21.62	22.09
8H	4H	24.72	25.47	25.18	25.91	26.38	19.86	20.61	20.32	21.05	21.52
	6H	25.52	26.14	26.02	26.63	27.11	20.60	21.21	21.09	21.71	22.18
	8H	25.83	26.38	26.34	26.89	27.38	20.89	21.45	21.41	21.96	22.45
	12H	26.06	26.54	26.57	27.04	27.60	21.14	21.62	21.65	22.12	22.68
12H	4H	24.70	25.36	25.18	25.84	26.32	19.92	20.58	20.40	21.06	21.54
	6H	25.50	26.05	26.01	26.56	27.05	20.68	21.24	21.20	21.75	22.24
	8H	25.83	26.32	26.34	26.81	27.38	21.04	21.53	21.55	22.02	22.59