

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: P1055299

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055299
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
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-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

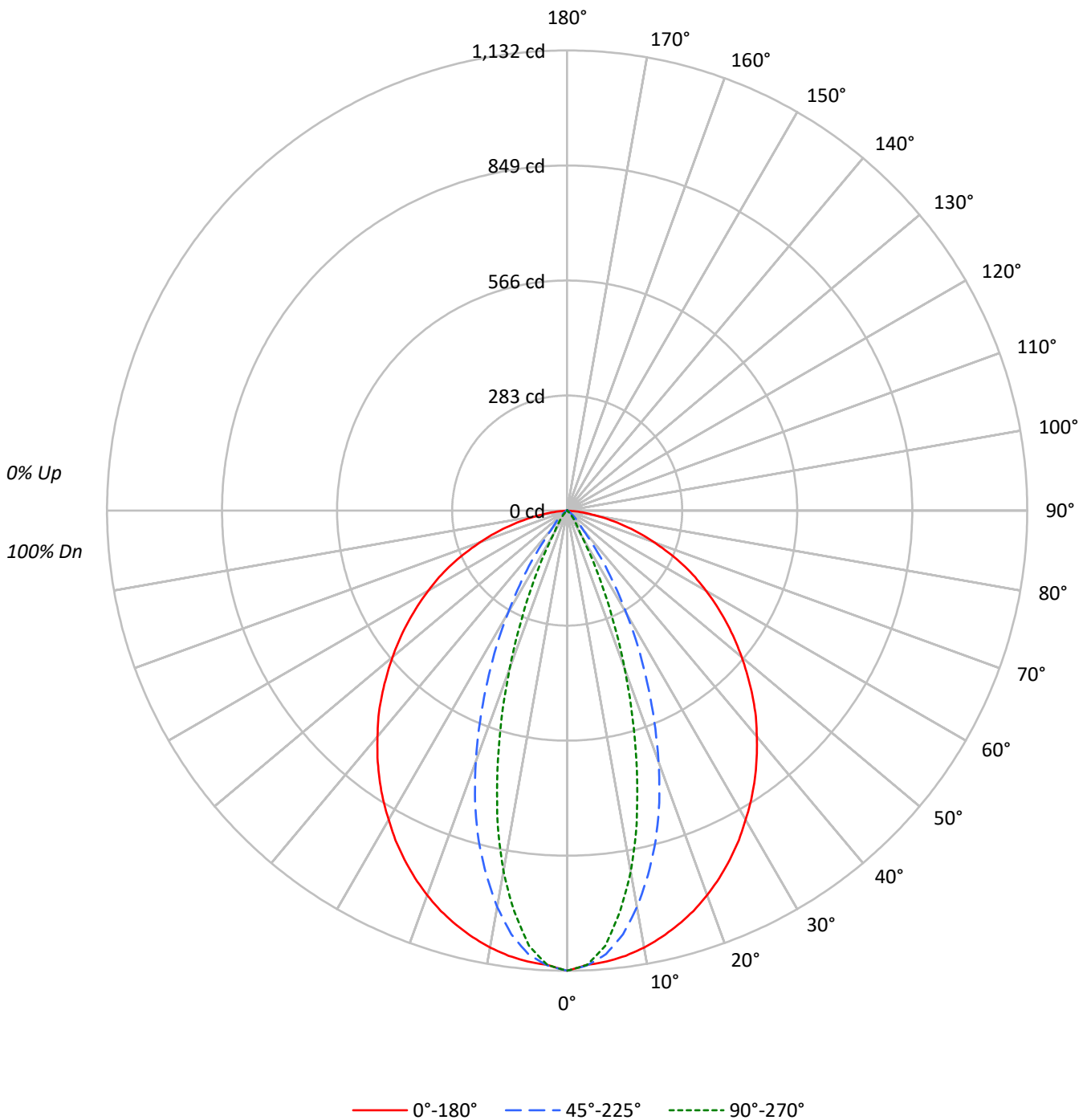
Lumens per Lamp: N/A
Luminaire Lumens: 1029.7 lumens
Efficiency: N/A
Efficacy: 28.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
Input Voltage (V): 120
Input Current (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	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21443	21443	21443
5°	21179	20833	20437
10°	20998	19046	17343
15°	20693	16484	12989
20°	20301	13246	8315
25°	19799	9708	4269
30°	19210	6346	1394
35°	18625	3520	812
40°	17953	1415	450
45°	17290	940	174
50°	16526	536	77
55°	15769	258	43
60°	14937	99	0
65°	14054	58	0
70°	12613	72	0
75°	10856	95	0
80°	8237	0	0
85°	3391	283	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17290 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.5	9.9
10°-20°	235.7	22.9
20°-30°	239.4	23.2
30°-40°	179.6	17.4
40°-50°	125.8	12.2
50°-60°	77.0	7.5
60°-70°	45.8	4.5
70°-80°	21.1	2.1
80°-90°	3.8	0.4
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°	576.6	56.0
0°-40°	756.2	73.4
0°-60°	958.9	93.1
0°-90°	1029.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1029.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1132	1132	1132	1132	1132	
5°	1114	1124	1095	1075	1075	106
15°	1055	998	840	712	662	297
25°	947	780	464	265	204	436
35°	805	524	152	46	35	503
45°	645	277	35	10	6	497
55°	477	85	8	3	1	427
65°	314	25	1	1	0	309
75°	148	3	1	1	0	158
85°	16	0	1	1	0	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1131.8	1131.8	1131.8	1131.8	1131.8
2.5°	1118.8	1135.7	1120.1	1117.5	1118.8
5°	1113.6	1124.0	1095.4	1074.6	1074.6
7.5°	1104.5	1104.5	1051.1	1008.2	995.2
10°	1091.5	1077.2	990.0	921.0	901.5
12.5°	1074.6	1040.7	918.4	820.9	789.7
15°	1055.0	997.8	840.4	711.6	662.2
17.5°	1032.9	949.7	753.2	593.2	536.0
20°	1006.9	897.6	657.0	472.2	412.4
22.5°	978.3	840.4	559.4	364.3	300.5
25°	947.1	780.5	464.4	265.4	204.2
27.5°	914.5	718.1	377.3	182.1	124.9
30°	878.1	653.1	290.1	108.0	63.7
32.5°	843.0	590.6	217.3	58.5	46.8
35°	805.3	524.3	152.2	45.5	35.1
37.5°	766.2	461.8	93.7	33.8	26.0
40°	725.9	398.1	57.2	24.7	18.2
42.5°	686.9	338.2	45.5	16.9	11.7
45°	645.3	277.1	35.1	10.4	6.5
47.5°	602.3	221.2	26.0	6.5	3.9
50°	560.7	171.7	18.2	3.9	2.6
52.5°	519.1	126.2	11.7	2.6	1.3
55°	477.4	84.6	7.8	2.6	1.3
57.5°	435.8	59.8	5.2	1.3	1.3
60°	394.2	46.8	2.6	1.3	0.0
62.5°	355.1	36.4	2.6	1.3	1.3
65°	313.5	24.7	1.3	1.3	0.0
67.5°	269.3	15.6	1.3	1.3	0.0
70°	227.7	9.1	1.3	1.3	0.0
72.5°	187.3	5.2	1.3	1.3	0.0
75°	148.3	2.6	1.3	1.3	0.0
77.5°	110.6	1.3	0.0	1.3	0.0
80°	75.5	0.0	0.0	1.3	0.0
82.5°	44.2	0.0	0.0	1.3	0.0
85°	15.6	0.0	1.3	1.3	0.0
87.5°	0.0	0.0	1.3	1.3	0.0
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	16.86	18.12	17.23	18.43	18.75	0.00	0.00	0.00	0.00	0.00
	3H	20.60	21.72	20.98	22.05	22.42	0.00	0.00	0.00	0.00	0.00
	4H	21.91	22.95	22.32	23.31	23.69	0.00	0.00	0.00	0.00	0.00
	6H	22.77	23.72	23.18	24.10	24.49	0.00	0.00	0.00	0.00	0.00
	8H	22.98	23.89	23.41	24.28	24.68	0.00	0.00	0.00	0.00	0.00
	12H	23.05	23.91	23.48	24.29	24.72	0.00	0.00	0.00	0.00	0.00
4H	2H	16.61	17.65	17.02	18.01	18.39	0.00	0.00	0.00	0.00	0.00
	3H	20.36	21.21	20.77	21.61	22.02	0.00	0.00	0.00	0.00	0.00
	4H	21.65	22.41	22.09	22.83	23.28	0.00	0.00	0.00	0.00	0.00
	6H	22.57	23.23	23.04	23.67	24.14	0.00	0.00	0.00	0.00	0.00
	8H	22.83	23.44	23.30	23.89	24.36	0.00	0.00	0.00	0.00	0.00
	12H	22.93	23.47	23.42	23.95	24.43	0.00	0.00	0.00	0.00	0.00
8H	4H	21.51	22.12	21.98	22.57	23.04	0.00	0.00	0.00	0.00	0.00
	6H	22.41	22.91	22.91	23.40	23.89	0.00	0.00	0.00	0.00	0.00
	8H	22.67	23.11	23.19	23.63	24.12	0.00	0.00	0.00	0.00	0.00
	12H	22.78	23.17	23.30	23.67	24.24	0.00	0.00	0.00	0.00	0.00
12H	4H	21.46	22.00	21.95	22.48	22.96	0.00	0.00	0.00	0.00	0.00
	6H	22.35	22.79	22.87	23.31	23.80	0.00	0.00	0.00	0.00	0.00
	8H	22.62	23.01	23.14	23.51	24.08	0.00	0.00	0.00	0.00	0.00