

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: P1055572

Luminaire Tested: S123R3DR-S1000D950-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055572
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1000D950-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

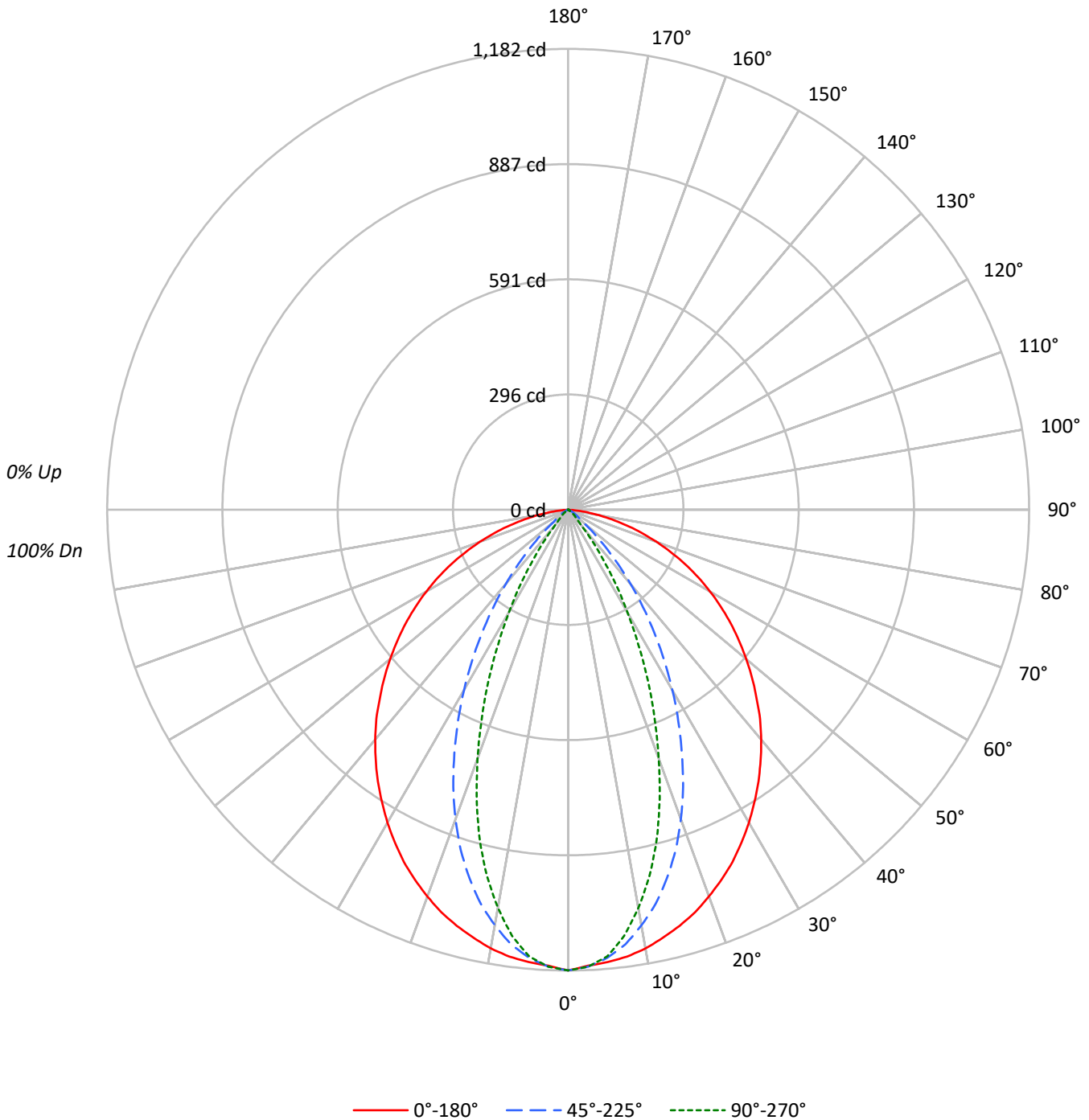
Lumens per Lamp: N/A
Luminaire Lumens: 1383.2 lumens
Efficiency: N/A
Efficacy: 39.9 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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				
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90				
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81				
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73				
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65				
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59				
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56	54				
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50				
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43				
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14248	14248	14248
5°	14096	13961	13917
10°	13988	13252	12698
15°	13787	12211	10941
20°	13542	10838	8714
25°	13259	9182	6425
30°	12902	7441	4215
35°	12522	5665	2309
40°	12117	3917	792
45°	11644	2278	460
50°	11175	897	276
55°	10695	568	128
60°	10139	354	60
65°	9443	174	34
70°	8471	88	42
75°	7197	56	56
80°	5360	83	0
85°	2033	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11644 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.4	7.8
10°-20°	275.0	19.9
20°-30°	328.0	23.7
30°-40°	278.2	20.1
40°-50°	189.1	13.7
50°-60°	117.2	8.5
60°-70°	59.4	4.3
70°-80°	24.2	1.7
80°-90°	3.7	0.3
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°	711.3	51.4
0°-40°	989.6	71.5
0°-60°	1295.9	93.7
0°-90°	1383.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1383.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1182	1182	1182	1182	1182	
5°	1165	1176	1154	1145	1150	111
15°	1105	1076	978	901	877	311
25°	997	904	690	533	483	459
35°	851	683	385	207	157	532
45°	683	448	134	33	27	527
55°	509	226	27	10	6	455
65°	331	55	6	1	1	327
75°	154	10	1	1	1	164
85°	15	0	0	1	0	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1181.8	1181.8	1181.8	1181.8	1181.8
2.5°	1170.8	1186.7	1173.2	1172.0	1173.2
5°	1164.7	1175.7	1153.6	1145.0	1149.9
7.5°	1156.1	1161.0	1124.2	1102.1	1102.1
10°	1142.6	1138.9	1082.5	1045.7	1037.2
12.5°	1124.2	1109.5	1035.9	978.3	962.4
15°	1104.6	1076.4	978.3	901.1	876.6
17.5°	1082.5	1039.6	915.8	815.3	779.7
20°	1055.5	997.9	844.7	722.1	679.2
22.5°	1027.3	952.6	769.9	626.5	578.6
25°	996.7	903.5	690.2	533.3	483.0
27.5°	962.4	852.0	611.7	443.8	388.6
30°	926.8	798.1	534.5	358.0	302.8
32.5°	888.8	741.7	457.3	279.5	228.0
35°	850.8	682.9	384.9	207.2	156.9
37.5°	810.4	624.0	315.1	143.4	99.3
40°	769.9	566.4	248.9	90.7	50.3
42.5°	728.2	506.3	188.8	45.4	34.3
45°	682.9	447.5	133.6	33.1	27.0
47.5°	639.9	391.1	88.3	27.0	20.8
50°	595.8	334.7	47.8	19.6	14.7
52.5°	551.7	280.7	34.3	14.7	9.8
55°	508.8	225.6	27.0	9.8	6.1
57.5°	464.6	177.8	20.8	6.1	3.7
60°	420.5	131.2	14.7	3.7	2.5
62.5°	376.4	90.7	9.8	2.5	1.2
65°	331.0	55.2	6.1	1.2	1.2
67.5°	284.4	38.0	3.7	1.2	1.2
70°	240.3	27.0	2.5	1.2	1.2
72.5°	196.2	17.2	1.2	1.2	0.0
75°	154.5	9.8	1.2	1.2	1.2
77.5°	114.0	3.7	1.2	1.2	0.0
80°	77.2	1.2	1.2	1.2	0.0
82.5°	42.9	0.0	1.2	1.2	0.0
85°	14.7	0.0	0.0	1.2	0.0
87.5°	0.0	0.0	0.0	1.2	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	18.28	19.56	18.64	19.87	20.19	0.00	0.00	0.00	0.00	0.00
	3H	20.22	21.36	20.60	21.69	22.05	0.00	0.00	0.00	0.00	0.00
	4H	21.05	22.11	21.45	22.46	22.84	0.00	0.00	0.00	0.00	0.00
	6H	21.60	22.57	22.02	22.94	23.34	0.00	0.00	0.00	0.00	0.00
	8H	21.73	22.65	22.16	23.04	23.44	0.00	0.00	0.00	0.00	0.00
	12H	21.75	22.63	22.19	23.01	23.44	0.00	0.00	0.00	0.00	0.00
4H	2H	18.04	19.10	18.45	19.45	19.83	0.00	0.00	0.00	0.00	0.00
	3H	19.99	20.86	20.41	21.26	21.67	0.00	0.00	0.00	0.00	0.00
	4H	20.81	21.58	21.24	22.00	22.44	0.00	0.00	0.00	0.00	0.00
	6H	21.41	22.07	21.87	22.52	22.99	0.00	0.00	0.00	0.00	0.00
	8H	21.56	22.18	22.03	22.63	23.10	0.00	0.00	0.00	0.00	0.00
	12H	21.61	22.15	22.10	22.64	23.11	0.00	0.00	0.00	0.00	0.00
8H	4H	20.67	21.28	21.14	21.73	22.20	0.00	0.00	0.00	0.00	0.00
	6H	21.25	21.75	21.75	22.25	22.73	0.00	0.00	0.00	0.00	0.00
	8H	21.40	21.85	21.92	22.36	22.86	0.00	0.00	0.00	0.00	0.00
	12H	21.45	21.85	21.97	22.35	22.92	0.00	0.00	0.00	0.00	0.00
12H	4H	20.62	21.16	21.10	21.65	22.12	0.00	0.00	0.00	0.00	0.00
	6H	21.18	21.63	21.71	22.15	22.64	0.00	0.00	0.00	0.00	0.00
	8H	21.35	21.75	21.87	22.24	22.82	0.00	0.00	0.00	0.00	0.00