

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059489

Luminaire Tested: S123RDR-H1000D950-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059489
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1000D950-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

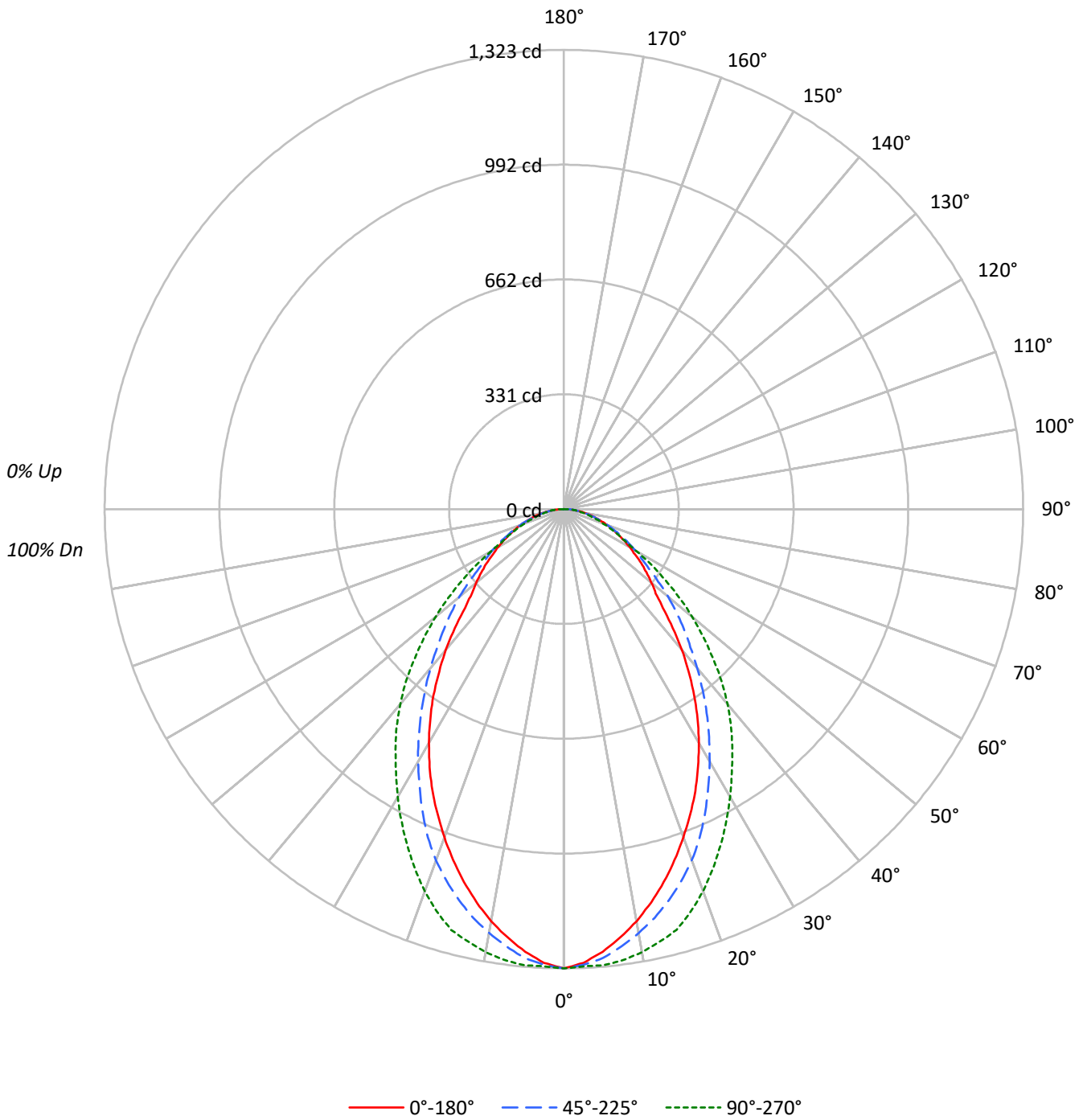
Lumens per Lamp: N/A
Luminaire Lumens: 2324.9 lumens
Efficiency: N/A
Efficacy: 74.5 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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	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	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66				
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58				
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51				
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41				
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15536	15536	15536
5°	15085	15300	15542
10°	14377	14785	15451
15°	13523	14188	15254
20°	12579	13459	14642
25°	11610	12481	13837
30°	10545	11394	12984
35°	9385	10282	12127
40°	8098	9163	11241
45°	6694	8112	10078
50°	6012	7156	8798
55°	5571	6107	7296
60°	5134	5561	5589
65°	4776	5029	4682
70°	4494	4573	4106
75°	4237	4083	3616
80°	4003	3699	3388
85°	3840	4136	3840

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 10078 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.5	5.3
10°-20°	330.1	14.2
20°-30°	446.6	19.2
30°-40°	459.0	19.7
40°-50°	385.5	16.6
50°-60°	276.4	11.9
60°-70°	175.9	7.6
70°-80°	96.7	4.2
80°-90°	32.2	1.4
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°	899.3	38.7
0°-40°	1358.3	58.4
0°-60°	2020.1	86.9
0°-90°	2324.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2324.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1323	1323	1323	1323	1323	
5°	1280	1303	1298	1307	1318	120
15°	1112	1143	1167	1217	1255	312
25°	896	930	963	1016	1068	411
35°	655	690	717	781	846	407
45°	403	438	488	559	607	318
55°	272	278	298	338	356	243
65°	172	182	181	171	168	171
75°	93	102	90	83	80	99
85°	28	30	31	32	28	31
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1323.1	1323.1	1323.1	1323.1	1323.1
2.5°	1308.3	1326.5	1314.0	1315.1	1318.5
5°	1279.8	1302.6	1298.0	1307.2	1318.5
7.5°	1244.5	1269.6	1270.7	1292.4	1310.6
10°	1205.8	1232.0	1240.0	1273.0	1295.8
12.5°	1160.3	1188.7	1205.8	1246.8	1276.4
15°	1112.4	1143.2	1167.1	1217.2	1254.8
17.5°	1060.1	1093.1	1123.8	1177.3	1216.1
20°	1006.6	1041.9	1077.1	1127.2	1171.7
22.5°	950.8	987.2	1023.6	1072.6	1121.6
25°	896.1	930.3	963.3	1015.7	1068.0
27.5°	836.9	872.2	900.7	958.7	1013.4
30°	777.7	813.0	840.3	900.7	957.6
32.5°	716.2	752.6	777.7	840.3	899.5
35°	654.7	690.0	717.3	781.1	846.0
37.5°	589.8	628.5	655.9	727.6	791.4
40°	528.3	564.8	597.8	672.9	733.3
42.5°	464.6	502.1	539.7	617.1	672.9
45°	403.1	438.4	488.5	559.1	606.9
47.5°	358.7	381.4	439.5	498.7	544.3
50°	329.1	338.2	391.7	444.1	481.6
52.5°	299.5	306.3	342.7	390.6	419.0
55°	272.1	277.8	298.3	338.2	356.4
57.5°	242.5	248.2	265.3	288.1	298.3
60°	218.6	223.2	236.8	240.3	238.0
62.5°	194.7	201.5	208.4	200.4	197.0
65°	171.9	182.2	181.0	170.8	168.5
67.5°	151.4	161.7	156.0	145.7	142.3
70°	130.9	141.2	133.2	123.0	119.6
72.5°	111.6	123.0	110.4	101.3	99.1
75°	93.4	102.5	90.0	83.1	79.7
77.5°	76.3	83.1	71.7	66.0	63.8
80°	59.2	63.8	54.7	51.2	50.1
82.5°	43.3	45.5	39.9	42.1	41.0
85°	28.5	29.6	30.7	31.9	28.5
87.5°	13.7	19.4	19.4	18.2	14.8
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	16.71	18.18	17.08	18.49	18.81	17.79	19.25	18.15	19.56	19.88
	3H	18.41	19.72	18.79	20.05	20.41	18.87	20.18	19.25	20.51	20.87
	4H	19.07	20.29	19.47	20.64	21.02	19.27	20.50	19.67	20.85	21.23
	6H	19.57	20.70	19.98	21.07	21.46	19.58	20.71	19.99	21.08	21.47
	8H	19.74	20.82	20.17	21.21	21.61	19.72	20.79	20.14	21.18	21.59
	12H	19.87	20.90	20.30	21.28	21.71	19.84	20.87	20.27	21.25	21.68
4H	2H	17.32	18.54	17.72	18.89	19.27	18.19	19.42	18.59	19.77	20.15
	3H	19.24	20.26	19.66	20.66	21.06	19.51	20.52	19.92	20.93	21.33
	4H	20.06	20.97	20.49	21.39	21.83	20.03	20.94	20.46	21.36	21.80
	6H	20.70	21.50	21.16	21.94	22.41	20.46	21.25	20.92	21.70	22.16
	8H	20.93	21.67	21.39	22.12	22.58	20.65	21.39	21.11	21.84	22.31
	12H	21.10	21.76	21.58	22.24	22.71	20.83	21.50	21.31	21.97	22.45
8H	4H	20.29	21.04	20.76	21.48	21.95	20.27	21.02	20.74	21.46	21.93
	6H	21.08	21.70	21.58	22.19	22.67	20.82	21.43	21.32	21.93	22.40
	8H	21.39	21.95	21.91	22.46	22.95	21.10	21.65	21.61	22.16	22.65
	12H	21.66	22.15	22.17	22.64	23.21	21.39	21.88	21.90	22.37	22.94
12H	4H	20.31	20.97	20.79	21.45	21.92	20.30	20.96	20.78	21.44	21.91
	6H	21.12	21.67	21.63	22.18	22.67	20.87	21.42	21.39	21.94	22.42
	8H	21.49	21.98	22.00	22.47	23.04	21.21	21.70	21.72	22.19	22.76