

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: P1055687

Luminaire Tested: S123R3DR-H1000D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055687
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-H1000D835-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

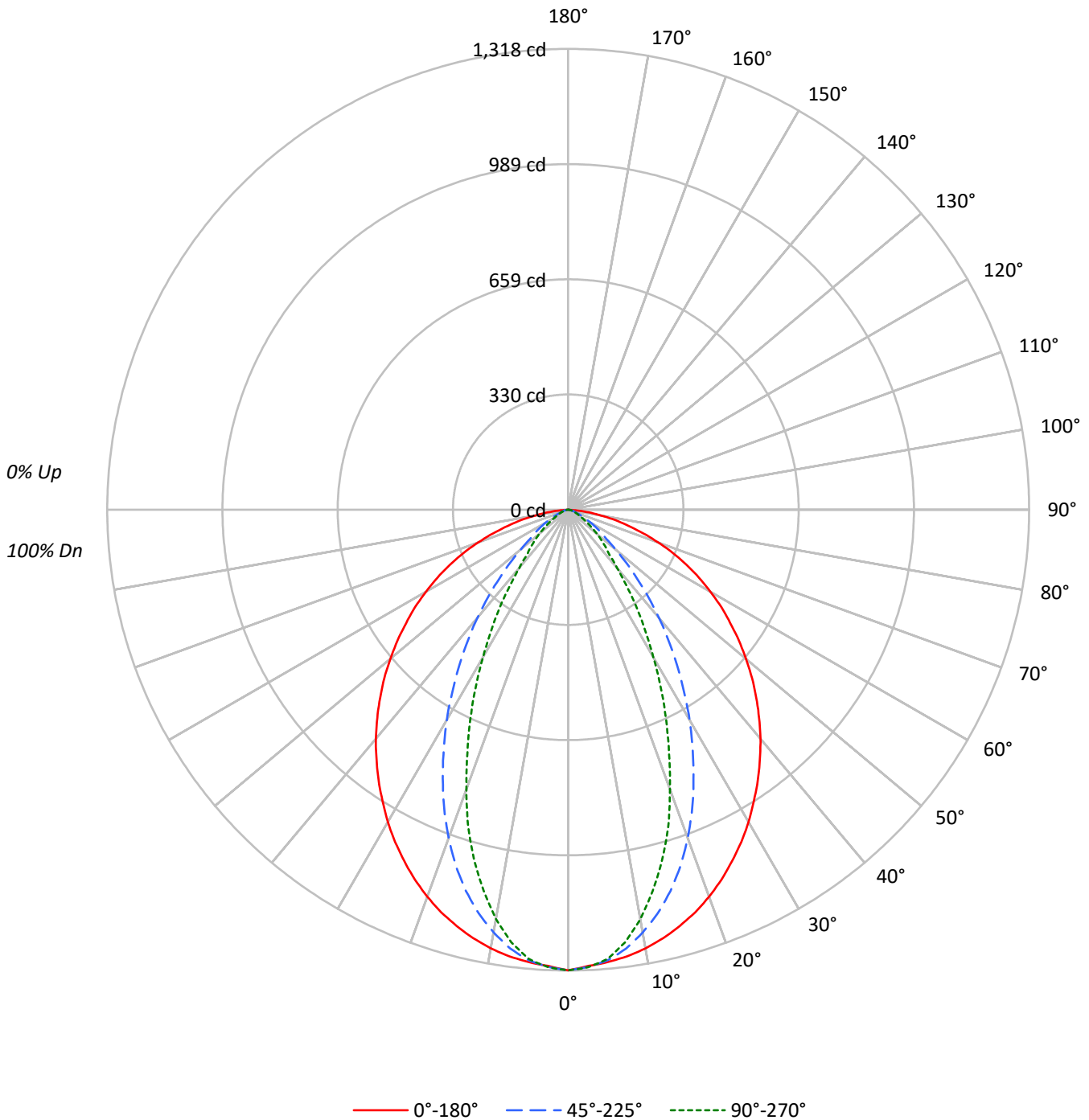
Lumens per Lamp: N/A
Luminaire Lumens: 1832.2 lumens
Efficiency: N/A
Efficacy: 59.3 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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

TEST NUMBER: P1055687

CATALOG NUMBER: S123R3DR-H1000D835-X4F0-XX-UDD-F-S

Luminous Intensity Polar Plot





TEST NUMBER: P1055687

CATALOG NUMBER: S123R3DR-H1000D835-X4F0-XX-UDD-F-S

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15884	15884	15884
5°	15719	15658	15613
10°	15594	15029	14555
15°	15385	14092	12954
20°	15110	12819	10912
25°	14753	11281	8805
30°	14360	9667	6780
35°	13915	7977	5017
40°	13464	6349	3420
45°	12967	4749	2576
50°	12437	3303	2014
55°	11891	2415	1469
60°	11323	1806	1054
65°	10652	1212	819
70°	9641	881	659
75°	8320	638	522
80°	6679	521	430
85°	3458	512	346

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12967 cd/sqm



TEST NUMBER: P1055687

CATALOG NUMBER: S123R3DR-H1000D835-X4F0-XX-UDD-F-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.8	6.6
10°-20°	317.0	17.3
20°-30°	398.3	21.7
30°-40°	371.0	20.2
40°-50°	284.0	15.5
50°-60°	188.8	10.3
60°-70°	101.7	5.6
70°-80°	41.7	2.3
80°-90°	8.0	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°	837.1	45.7
0°-40°	1208.1	65.9
0°-60°	1680.9	91.7
0°-90°	1832.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1832.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1318	1318	1318	1318	1318	
5°	1299	1312	1294	1289	1290	123
15°	1233	1213	1129	1063	1038	347
25°	1109	1034	848	707	662	511
35°	945	806	542	383	341	591
45°	760	562	278	164	151	587
55°	566	327	115	80	70	507
65°	373	126	42	31	29	369
75°	179	30	14	12	11	191
85°	25	4	4	4	2	37
90°	0	0	0	0	0	



TEST NUMBER: P1055687

CATALOG NUMBER: S123R3DR-H1000D835-X4F0-XX-UDD-F-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1317.5	1317.5	1317.5	1317.5	1317.5
2.5°	1306.3	1322.5	1308.8	1310.0	1310.0
5°	1298.8	1312.5	1293.8	1288.8	1290.1
7.5°	1288.8	1297.5	1266.3	1250.1	1247.6
10°	1273.8	1276.3	1227.6	1198.9	1188.9
12.5°	1255.1	1246.3	1182.7	1135.2	1116.5
15°	1232.6	1212.6	1129.0	1062.8	1037.8
17.5°	1207.6	1173.9	1067.8	981.6	951.6
20°	1177.7	1130.2	999.1	891.7	850.5
22.5°	1145.2	1084.0	926.6	799.3	753.1
25°	1109.0	1034.0	848.0	706.8	661.9
27.5°	1071.5	980.3	770.5	619.4	573.2
30°	1031.5	925.4	694.4	534.5	487.0
32.5°	987.8	865.4	615.7	455.8	408.4
35°	945.4	805.5	542.0	383.4	340.9
37.5°	900.4	745.6	470.8	319.7	272.2
40°	855.5	684.4	403.4	257.3	217.3
42.5°	808.0	623.2	339.7	204.8	173.6
45°	760.5	562.0	278.5	163.6	151.1
47.5°	713.1	500.8	224.8	141.1	128.6
50°	663.1	442.1	176.1	119.9	107.4
52.5°	615.7	383.4	137.4	98.7	87.4
55°	565.7	327.2	114.9	79.9	69.9
57.5°	519.5	269.8	94.9	62.4	54.9
60°	469.6	218.5	74.9	48.7	43.7
62.5°	422.1	171.1	57.4	38.7	35.0
65°	373.4	126.1	42.5	31.2	28.7
67.5°	324.7	91.2	32.5	25.0	23.7
70°	273.5	68.7	25.0	20.0	18.7
72.5°	224.8	48.7	18.7	16.2	15.0
75°	178.6	30.0	13.7	12.5	11.2
77.5°	137.4	17.5	10.0	10.0	8.7
80°	96.2	10.0	7.5	7.5	6.2
82.5°	58.7	6.2	5.0	5.0	5.0
85°	25.0	3.7	3.7	3.7	2.5
87.5°	3.7	1.2	1.2	1.2	1.2
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055687
 CATALOG NUMBER: S123R3DR-H1000D835-X4F0-XX-UDD-F-S

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	19.42	20.78	19.79	21.09	21.41	7.99	9.35	8.35	9.66	9.97
	3H	21.17	22.38	21.55	22.71	23.07	8.65	9.86	9.03	10.19	10.55
	4H	21.87	23.00	22.28	23.35	23.73	8.85	9.97	9.25	10.32	10.71
	6H	22.39	23.42	22.80	23.79	24.18	8.97	10.00	9.38	10.37	10.77
	8H	22.53	23.51	22.96	23.90	24.30	9.00	9.98	9.43	10.37	10.78
	12H	22.58	23.52	23.01	23.90	24.33	9.01	9.95	9.45	10.33	10.76
4H	2H	19.23	20.35	19.63	20.70	21.09	8.55	9.67	8.95	10.02	10.40
	3H	21.02	21.94	21.43	22.35	22.75	9.35	10.27	9.76	10.67	11.07
	4H	21.72	22.54	22.15	22.96	23.40	9.61	10.43	10.04	10.85	11.29
	6H	22.29	23.00	22.75	23.44	23.91	9.80	10.51	10.26	10.96	11.42
	8H	22.46	23.13	22.93	23.57	24.04	9.86	10.52	10.32	10.96	11.44
	12H	22.55	23.13	23.03	23.62	24.09	9.89	10.47	10.37	10.96	11.43
8H	4H	21.59	22.26	22.06	22.70	23.17	9.92	10.58	10.39	11.03	11.50
	6H	22.15	22.69	22.65	23.19	23.67	10.17	10.71	10.67	11.20	11.68
	8H	22.32	22.81	22.84	23.32	23.82	10.25	10.74	10.78	11.25	11.75
	12H	22.43	22.86	22.94	23.35	23.92	10.33	10.76	10.85	11.26	11.83
12H	4H	21.55	22.14	22.04	22.62	23.09	9.96	10.55	10.45	11.03	11.51
	6H	22.09	22.58	22.61	23.09	23.58	10.21	10.70	10.73	11.21	11.70
	8H	22.28	22.71	22.80	23.21	23.78	10.34	10.77	10.85	11.26	11.83