

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: P1056499

Luminaire Tested: S125R3DR-H1090D840-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056499
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H1090D840-X4F0-XX-UDD-F-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

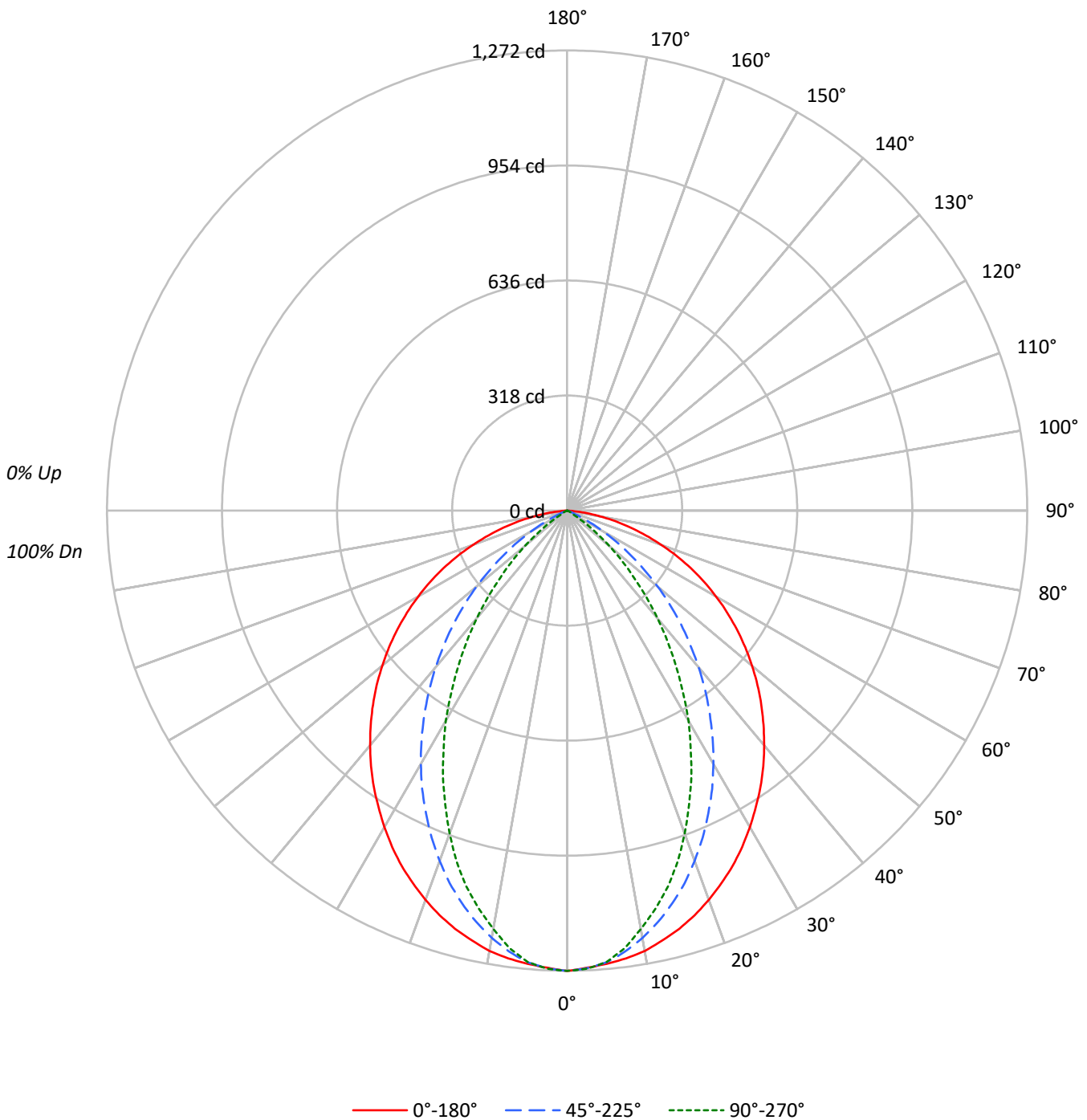
Lumens per Lamp: N/A
Luminaire Lumens: 2062.6 lumens
Efficiency: N/A
Efficacy: 66.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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

TEST NUMBER: P1056499

CATALOG NUMBER: S125R3DR-H1090D840-X4F0-XX-UDD-F-B

Luminous Intensity Polar Plot





TEST NUMBER: P1056499

CATALOG NUMBER: S125R3DR-H1090D840-X4F0-XX-UDD-F-B

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	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78				78
3	96	87	81	75	94	86	80	75	83	78	74	80	76	72	78	74	71	69				69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	61				61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55				55
6	77	66	58	53	76	65	58	52	63	57	52	62	56	52	60	55	51	49				49
7	72	61	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	45				45
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41				41
9	64	52	44	39	62	51	44	39	50	44	39	49	43	39	48	43	39	37				37
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34				34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8996	8996	8996
5°	8923	8896	8887
10°	8872	8610	8428
15°	8759	8224	7873
20°	8615	7752	7145
25°	8450	7201	6335
30°	8246	6599	5477
35°	8043	5931	4527
40°	7821	5214	3584
45°	7590	4451	2597
50°	7338	3592	1678
55°	7057	2626	746
60°	6723	1623	213
65°	6308	590	127
70°	5709	209	52
75°	4960	68	36
80°	3798	53	0
85°	1736	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7590 cd/sqm



TEST NUMBER: P1056499

CATALOG NUMBER: S125R3DR-H1090D840-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	5.7
10°-20°	317.4	15.4
20°-30°	429.4	20.8
30°-40°	441.1	21.4
40°-50°	365.4	17.7
50°-60°	234.6	11.4
60°-70°	113.3	5.5
70°-80°	38.3	1.9
80°-90°	4.9	0.2
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°	864.9	41.9
0°-40°	1306.0	63.3
0°-60°	1906.0	92.4
0°-90°	2062.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2062.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1272	1272	1272	1272	1272	
5°	1257	1268	1254	1246	1252	119
15°	1197	1182	1124	1085	1076	337
25°	1083	1030	923	840	812	499
35°	932	842	687	568	525	583
45°	759	634	445	308	260	585
55°	573	420	213	93	60	512
65°	377	208	35	10	8	373
75°	182	39	2	1	1	193
85°	21	0	0	0	0	34
90°	0	0	0	0	0	



TEST NUMBER: P1056499

CATALOG NUMBER: S125R3DR-H1090D840-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1272.5	1272.5	1272.5	1272.5	1272.5
2.5°	1265.0	1275.0	1266.2	1265.0	1267.5
5°	1257.4	1267.5	1253.6	1246.0	1252.3
7.5°	1248.6	1253.6	1229.6	1217.0	1219.6
10°	1235.9	1234.7	1199.4	1177.9	1174.1
12.5°	1217.0	1210.7	1164.1	1133.8	1127.5
15°	1196.8	1181.7	1123.7	1084.6	1075.8
17.5°	1172.9	1148.9	1079.6	1029.1	1016.5
20°	1145.1	1112.4	1030.4	968.6	949.7
22.5°	1114.9	1073.3	978.7	905.5	880.3
25°	1083.3	1030.4	923.2	839.9	812.2
27.5°	1048.0	986.2	867.7	773.1	739.0
30°	1010.2	939.6	808.4	705.0	670.9
32.5°	971.1	892.9	749.1	636.9	595.3
35°	932.0	842.5	687.3	567.5	524.6
37.5°	890.4	792.0	626.8	501.9	455.3
40°	847.5	740.3	565.0	433.8	388.4
42.5°	803.4	687.3	503.2	369.5	322.9
45°	759.2	634.4	445.2	307.7	259.8
47.5°	713.8	580.1	384.7	247.2	205.6
50°	667.2	527.2	326.6	193.0	152.6
52.5°	620.5	472.9	267.4	140.0	103.4
55°	572.6	420.0	213.1	93.3	60.5
57.5°	524.6	365.7	162.7	51.7	22.7
60°	475.5	314.0	114.8	17.7	15.1
62.5°	427.5	258.5	71.9	13.9	11.4
65°	377.1	208.1	35.3	10.1	7.6
67.5°	327.9	160.2	15.1	6.3	3.8
70°	276.2	116.0	10.1	3.8	2.5
72.5°	228.3	74.4	6.3	2.5	1.3
75°	181.6	39.1	2.5	1.3	1.3
77.5°	136.2	16.4	1.3	1.3	1.3
80°	93.3	7.6	1.3	1.3	0.0
82.5°	55.5	2.5	1.3	1.3	0.0
85°	21.4	0.0	0.0	0.0	0.0
87.5°	1.3	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1056499

CATALOG NUMBER: S125R3DR-H1090D840-X4F0-XX-UDD-F-B

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	18.70	20.08	19.06	20.40	20.71	3.56	4.95	3.93	5.26	5.58
	3H	20.25	21.48	20.63	21.81	22.17	3.49	4.71	3.87	5.04	5.41
	4H	20.77	21.92	21.17	22.27	22.65	3.42	4.57	3.82	4.92	5.30
	6H	21.11	22.16	21.53	22.53	22.93	3.35	4.40	3.77	4.77	5.17
	8H	21.19	22.19	21.62	22.58	22.99	3.31	4.31	3.74	4.70	5.10
	12H	21.21	22.16	21.64	22.55	22.98	3.27	4.22	3.70	4.61	5.04
4H	2H	18.50	19.65	18.91	20.00	20.38	4.43	5.57	4.83	5.92	6.31
	3H	20.12	21.05	20.53	21.45	21.86	4.38	5.31	4.79	5.71	6.12
	4H	20.64	21.47	21.07	21.89	22.33	4.30	5.13	4.74	5.55	5.99
	6H	21.01	21.73	21.48	22.18	22.64	4.24	4.95	4.70	5.40	5.87
	8H	21.11	21.78	21.58	22.23	22.70	4.19	4.86	4.65	5.30	5.77
	12H	21.15	21.74	21.63	22.22	22.70	4.14	4.74	4.63	5.22	5.69
8H	4H	20.51	21.18	20.98	21.63	22.10	5.32	5.99	5.79	6.44	6.91
	6H	20.87	21.42	21.37	21.91	22.39	5.24	5.79	5.74	6.28	6.76
	8H	20.96	21.46	21.48	21.97	22.46	5.19	5.68	5.71	6.19	6.69
	12H	21.01	21.44	21.52	21.93	22.50	5.15	5.58	5.66	6.08	6.65
12H	4H	20.47	21.06	20.95	21.55	22.02	5.40	5.99	5.89	6.48	6.95
	6H	20.81	21.30	21.33	21.81	22.31	5.30	5.80	5.82	6.31	6.80
	8H	20.92	21.36	21.43	21.85	22.42	5.27	5.71	5.79	6.20	6.77