

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: P1056516

Luminaire Tested: S125R3DR-H1090D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056516
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H1090D940-X4F0-XX-UDD-F-W
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

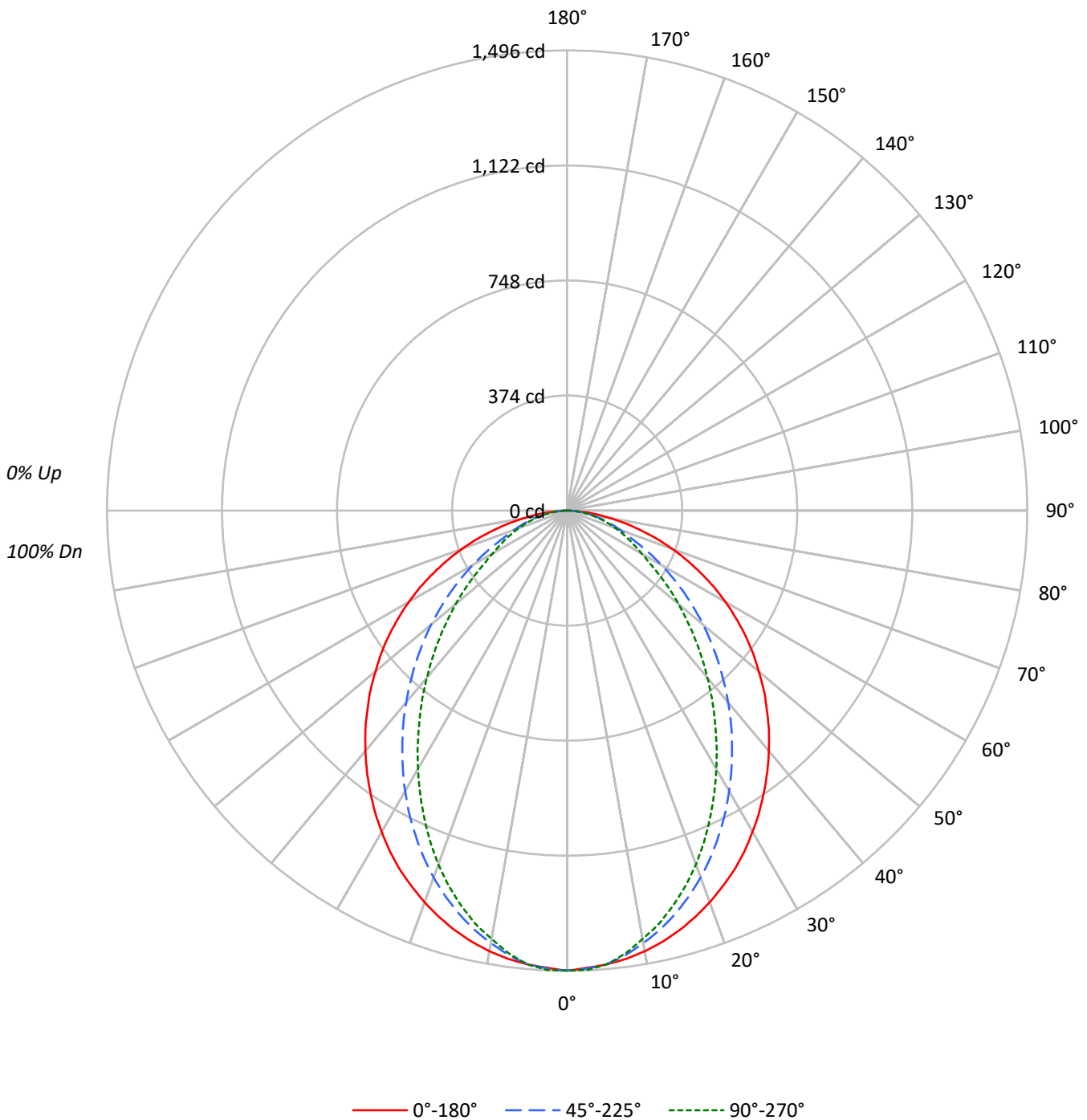
Lumens per Lamp: N/A
Luminaire Lumens: 3169.8 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
Input Voltage (V): 120
Input Current (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: P1056516

CATALOG NUMBER: S125R3DR-H1090D940-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P1056516

CATALOG NUMBER: S125R3DR-H1090D940-X4F0-XX-UDD-F-W

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	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55
5	79	67	58	52	77	66	58	52	63	56	51	62	55	51	60	54	50	48
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	43
7	68	55	47	41	66	54	46	41	53	46	41	51	45	40	50	44	40	38
8	63	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34
9	59	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	31
10	56	43	36	31	55	43	35	31	42	35	30	41	35	30	40	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10573	10573	10573
5°	10510	10503	10510
10°	10440	10248	10152
15°	10335	9935	9731
20°	10196	9550	9207
25°	10041	9094	8582
30°	9845	8600	7918
35°	9629	8063	7227
40°	9414	7512	6547
45°	9185	6936	5868
50°	8940	6344	5193
55°	8715	5695	4516
60°	8408	5007	3967
65°	7991	4247	3688
70°	7503	3797	3452
75°	6782	3499	3256
80°	5895	3175	3037
85°	4607	2798	2798

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9185 cd/sqm



TEST NUMBER: P1056516

CATALOG NUMBER: S125R3DR-H1090D940-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.9	4.4
10°-20°	384.2	12.1
20°-30°	542.7	17.1
30°-40°	597.5	18.8
40°-50°	557.3	17.6
50°-60°	444.9	14.0
60°-70°	299.4	9.4
70°-80°	159.5	5.0
80°-90°	44.3	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°	1066.9	33.7
0°-40°	1664.4	52.5
0°-60°	2666.6	84.1
0°-90°	3169.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3169.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1496	1496	1496	1496	1496	
5°	1481	1493	1480	1476	1481	141
15°	1412	1404	1358	1334	1330	398
25°	1287	1248	1166	1115	1100	593
35°	1116	1050	934	861	837	698
45°	919	832	694	609	587	709
55°	707	600	462	389	366	631
65°	478	373	254	225	220	474
75°	248	165	128	120	119	264
85°	57	39	34	36	34	68
90°	0	0	0	0	0	

TEST NUMBER: P1056516

CATALOG NUMBER: S125R3DR-H1090D940-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1495.6	1495.6	1495.6	1495.6	1495.6
2.5°	1487.8	1500.0	1490.0	1492.2	1494.5
5°	1481.1	1493.3	1480.0	1475.5	1481.1
7.5°	1470.0	1480.0	1457.7	1447.7	1452.1
10°	1454.4	1461.1	1427.6	1414.3	1414.3
12.5°	1435.4	1435.4	1395.4	1376.4	1376.4
15°	1412.1	1404.3	1357.5	1334.1	1329.6
17.5°	1385.3	1370.9	1315.2	1285.1	1279.5
20°	1355.3	1331.9	1269.5	1230.5	1223.9
22.5°	1321.9	1291.8	1219.4	1171.5	1163.7
25°	1287.3	1248.4	1165.9	1114.7	1100.2
27.5°	1248.4	1201.6	1111.4	1053.5	1035.7
30°	1206.0	1152.6	1053.5	988.9	970.0
32.5°	1162.6	1102.5	994.5	925.4	904.3
35°	1115.8	1050.1	934.3	860.8	837.4
37.5°	1069.1	997.8	875.3	798.5	774.0
40°	1020.1	942.1	814.0	735.0	709.4
42.5°	971.1	887.5	753.9	673.7	647.0
45°	918.7	831.9	693.8	609.1	586.9
47.5°	868.6	775.1	634.8	552.3	527.9
50°	812.9	716.1	576.8	494.4	472.2
52.5°	761.7	658.1	518.9	442.1	418.7
55°	707.1	600.2	462.1	388.6	366.4
57.5°	650.3	542.3	407.6	338.5	317.4
60°	594.7	484.4	354.1	290.7	280.6
62.5°	537.9	429.9	304.0	255.0	248.3
65°	477.7	373.1	253.9	224.9	220.5
67.5°	420.9	318.5	213.8	197.1	192.7
70°	363.0	263.9	183.7	169.3	167.0
72.5°	306.2	211.6	154.8	144.8	142.5
75°	248.3	164.8	128.1	120.3	119.2
77.5°	194.9	123.6	101.3	98.0	95.8
80°	144.8	92.4	78.0	75.7	74.6
82.5°	99.1	63.5	55.7	55.7	53.5
85°	56.8	39.0	34.5	35.6	34.5
87.5°	21.2	16.7	15.6	16.7	16.7
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1056516
 CATALOG NUMBER: S125R3DR-H1090D940-X4F0-XX-UDD-F-W

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	19.48	21.02	19.85	21.33	21.65	15.86	17.40	16.23	17.72	18.03
	3H	21.27	22.65	21.64	22.98	23.34	17.34	18.72	17.72	19.05	19.41
	4H	21.92	23.22	22.32	23.57	23.95	17.93	19.23	18.33	19.58	19.96
	6H	22.40	23.60	22.81	23.96	24.36	18.39	19.59	18.80	19.96	20.35
	8H	22.55	23.69	22.98	24.08	24.48	18.55	19.70	18.98	20.09	20.49
	12H	22.65	23.74	23.08	24.12	24.55	18.67	19.76	19.10	20.15	20.57
4H	2H	19.62	20.91	20.02	21.26	21.64	16.54	17.84	16.94	18.19	18.57
	3H	21.59	22.67	22.00	23.07	23.47	18.22	19.30	18.63	19.70	20.10
	4H	22.33	23.31	22.76	23.72	24.16	18.92	19.89	19.35	20.31	20.75
	6H	22.93	23.77	23.38	24.22	24.68	19.51	20.36	19.96	20.80	21.26
	8H	23.13	23.93	23.60	24.37	24.84	19.72	20.51	20.18	20.95	21.42
	12H	23.28	23.99	23.76	24.47	24.94	19.88	20.59	20.36	21.06	21.53
8H	4H	22.39	23.19	22.86	23.63	24.10	19.29	20.08	19.75	20.52	20.99
	6H	23.05	23.71	23.55	24.20	24.68	19.99	20.64	20.48	21.13	21.61
	8H	23.31	23.90	23.82	24.41	24.89	20.27	20.86	20.78	21.37	21.86
	12H	23.52	24.04	24.03	24.53	25.09	20.51	21.03	21.02	21.53	22.09
12H	4H	22.39	23.10	22.87	23.57	24.05	19.33	20.04	19.81	20.52	20.99
	6H	23.05	23.64	23.56	24.15	24.64	20.06	20.65	20.57	21.16	21.65
	8H	23.34	23.86	23.85	24.36	24.92	20.40	20.92	20.91	21.42	21.98