

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: P1056517

Luminaire Tested: S125R3DR-H1090D950-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056517
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-H1090D950-X4F0-XX-UDD-F-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

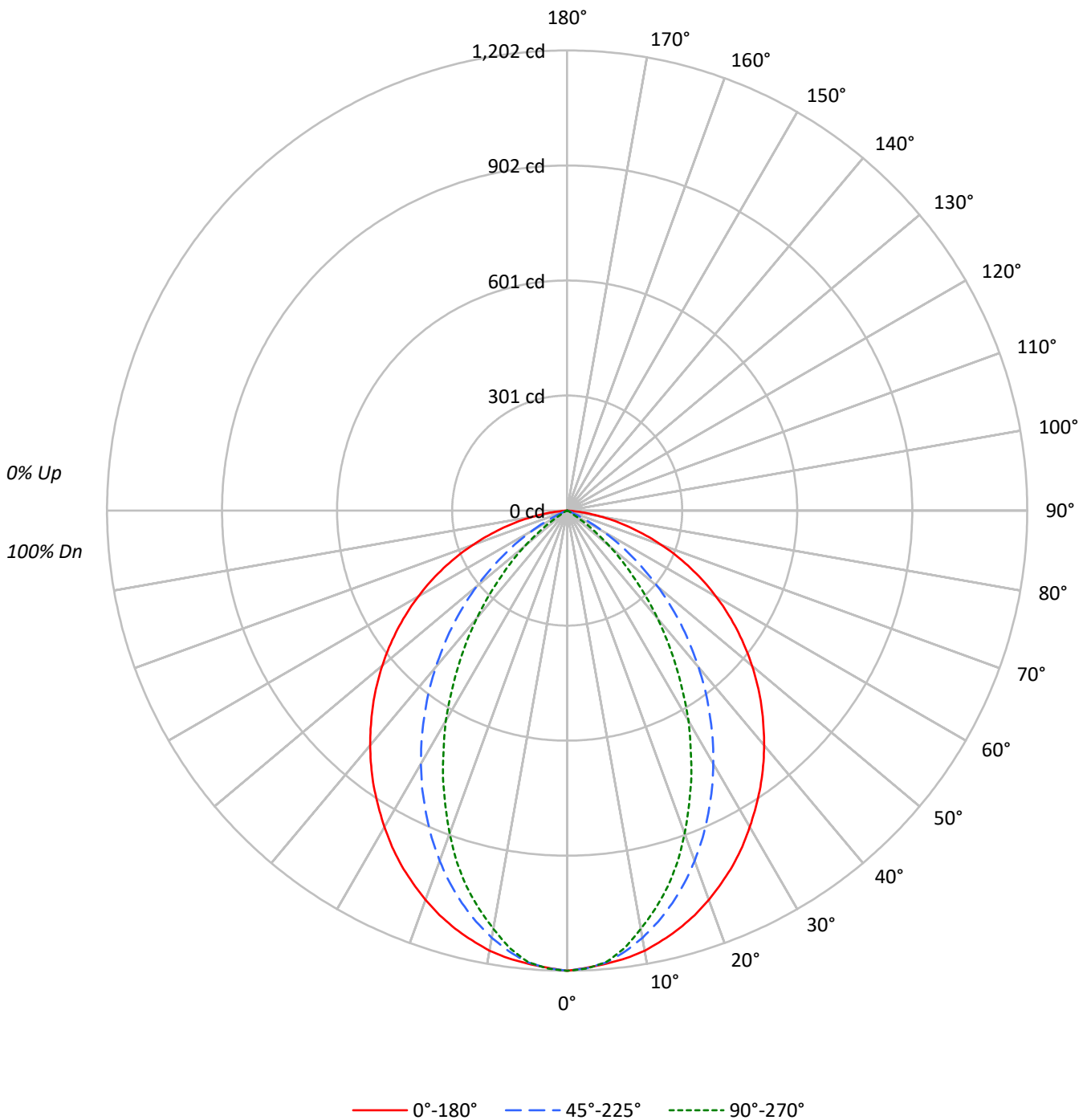
Lumens per Lamp: N/A
Luminaire Lumens: 1948.5 lumens
Efficiency: N/A
Efficacy: 63.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
Input Voltage (V): 120
Input Current (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: P1056517

CATALOG NUMBER: S125R3DR-H1090D950-X4F0-XX-UDD-F-B

Luminous Intensity Polar Plot





TEST NUMBER: P1056517

CATALOG NUMBER: S125R3DR-H1090D950-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	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°	8498	8498	8498
5°	8429	8404	8396
10°	8381	8133	7962
15°	8275	7769	7438
20°	8138	7323	6749
25°	7983	6803	5985
30°	7790	6234	5174
35°	7598	5604	4277
40°	7388	4925	3387
45°	7170	4205	2453
50°	6932	3394	1586
55°	6667	2481	705
60°	6351	1533	202
65°	5958	559	119
70°	5393	196	50
75°	4687	66	33
80°	3591	49	0
85°	1647	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7170 cd/sqm



TEST NUMBER: P1056517

CATALOG NUMBER: S125R3DR-H1090D950-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	5.7
10°-20°	299.8	15.4
20°-30°	405.6	20.8
30°-40°	416.7	21.4
40°-50°	345.2	17.7
50°-60°	221.6	11.4
60°-70°	107.1	5.5
70°-80°	36.2	1.9
80°-90°	4.7	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°	817.1	41.9
0°-40°	1233.7	63.3
0°-60°	1800.5	92.4
0°-90°	1948.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1948.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1202	1202	1202	1202	1202	
5°	1188	1197	1184	1177	1183	113
15°	1131	1116	1062	1025	1016	319
25°	1023	973	872	794	767	471
35°	880	796	649	536	496	550
45°	717	599	421	291	245	553
55°	541	397	201	88	57	483
65°	356	197	33	10	7	352
75°	172	37	2	1	1	182
85°	20	0	0	0	0	32
90°	0	0	0	0	0	



TEST NUMBER: P1056517

CATALOG NUMBER: S125R3DR-H1090D950-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1202.1	1202.1	1202.1	1202.1	1202.1
2.5°	1195.0	1204.5	1196.2	1195.0	1197.4
5°	1187.8	1197.4	1184.3	1177.1	1183.1
7.5°	1179.5	1184.3	1161.6	1149.7	1152.1
10°	1167.6	1166.4	1133.0	1112.8	1109.2
12.5°	1149.7	1143.7	1099.7	1071.1	1065.1
15°	1130.6	1116.3	1061.5	1024.6	1016.3
17.5°	1108.0	1085.4	1019.8	972.2	960.3
20°	1081.8	1050.8	973.4	915.0	897.1
22.5°	1053.2	1013.9	924.5	855.4	831.6
25°	1023.4	973.4	872.1	793.5	767.3
27.5°	990.1	931.7	819.7	730.3	698.2
30°	954.3	887.6	763.7	666.0	633.8
32.5°	917.4	843.5	707.7	601.7	562.3
35°	880.4	795.9	649.3	536.1	495.6
37.5°	841.1	748.2	592.1	474.2	430.1
40°	800.6	699.4	533.7	409.8	367.0
42.5°	758.9	649.3	475.4	349.1	305.0
45°	717.2	599.3	420.6	290.7	245.4
47.5°	674.3	548.0	363.4	233.5	194.2
50°	630.3	498.0	308.6	182.3	144.2
52.5°	586.2	446.8	252.6	132.2	97.7
55°	540.9	396.7	201.3	88.2	57.2
57.5°	495.6	345.5	153.7	48.8	21.4
60°	449.2	296.7	108.4	16.7	14.3
62.5°	403.9	244.2	67.9	13.1	10.7
65°	356.2	196.6	33.4	9.5	7.1
67.5°	309.8	151.3	14.3	6.0	3.6
70°	260.9	109.6	9.5	3.6	2.4
72.5°	215.6	70.3	6.0	2.4	1.2
75°	171.6	36.9	2.4	1.2	1.2
77.5°	128.7	15.5	1.2	1.2	1.2
80°	88.2	7.1	1.2	1.2	0.0
82.5°	52.4	2.4	1.2	1.2	0.0
85°	20.3	0.0	0.0	0.0	0.0
87.5°	1.2	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1056517

CATALOG NUMBER: S125R3DR-H1090D950-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	18.50	19.89	18.87	20.20	20.52	3.36	4.75	3.73	5.06	5.37
	3H	20.05	21.28	20.43	21.61	21.97	3.28	4.51	3.66	4.84	5.20
	4H	20.58	21.72	20.98	22.07	22.45	3.22	4.36	3.62	4.71	5.09
	6H	20.91	21.97	21.33	22.34	22.73	3.15	4.20	3.56	4.57	4.96
	8H	21.00	21.99	21.43	22.38	22.79	3.11	4.10	3.54	4.49	4.90
	12H	21.01	21.97	21.45	22.35	22.78	3.07	4.02	3.50	4.40	4.83
4H	2H	18.31	19.45	18.71	19.80	20.18	4.23	5.37	4.63	5.72	6.10
	3H	19.92	20.85	20.33	21.26	21.66	4.18	5.11	4.59	5.52	5.92
	4H	20.44	21.28	20.88	21.69	22.14	4.10	4.93	4.54	5.35	5.80
	6H	20.82	21.54	21.28	21.98	22.45	4.04	4.75	4.50	5.20	5.67
	8H	20.92	21.59	21.38	22.03	22.50	3.99	4.66	4.45	5.10	5.57
	12H	20.95	21.55	21.44	22.03	22.50	3.94	4.54	4.43	5.02	5.49
8H	4H	20.31	20.99	20.78	21.43	21.90	5.12	5.79	5.59	6.24	6.71
	6H	20.67	21.22	21.17	21.71	22.19	5.04	5.59	5.54	6.08	6.56
	8H	20.77	21.26	21.29	21.77	22.26	4.99	5.48	5.51	5.99	6.49
	12H	20.81	21.24	21.32	21.74	22.31	4.95	5.38	5.46	5.88	6.45
12H	4H	20.27	20.87	20.76	21.35	21.82	5.20	5.79	5.69	6.28	6.75
	6H	20.61	21.10	21.13	21.62	22.11	5.10	5.60	5.62	6.11	6.60
	8H	20.72	21.16	21.24	21.65	22.22	5.07	5.51	5.59	6.00	6.57