

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: P1056497

Luminaire Tested: S125R3DR-H1090D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056497
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-12)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H1090D835-X4F0-XX-UDD-F-S
Description: DEFINE 5, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

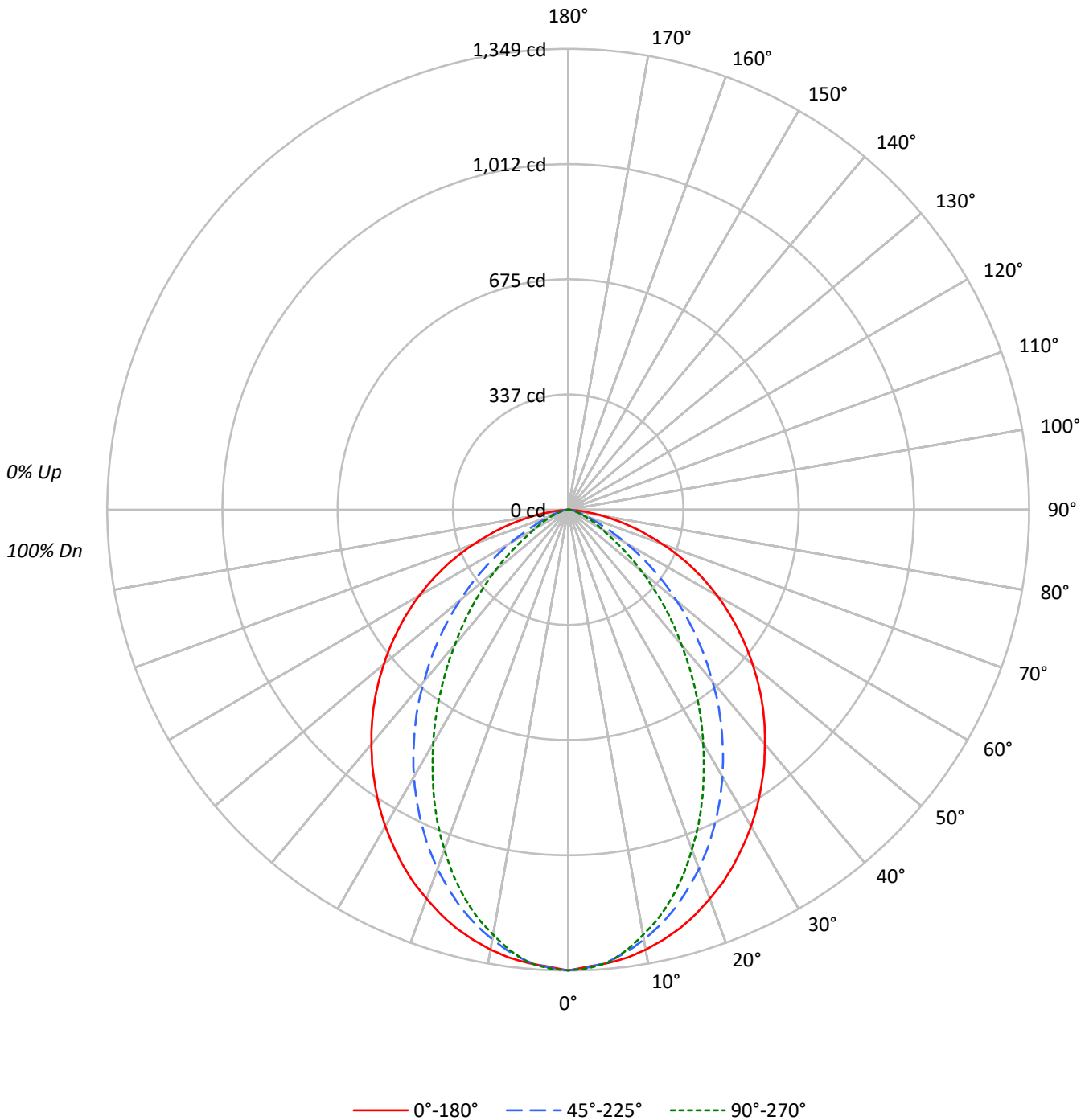
Lumens per Lamp: N/A
Luminaire Lumens: 2437.7 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

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: P1056497

CATALOG NUMBER: S125R3DR-H1090D835-X4F0-XX-UDD-F-S

Luminous Intensity Polar Plot





TEST NUMBER: P1056497

CATALOG NUMBER: S125R3DR-H1090D835-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	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	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88												88																
2	102	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77												77																
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67												67																
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59												59																
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52												52																
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47												47																
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	54	48	44	42												42																
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38												38																
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35												35																
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32												32																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9535	9535	9535
5°	9456	9430	9447
10°	9386	9171	9072
15°	9277	8838	8601
20°	9113	8418	7967
25°	8942	7919	7247
30°	8737	7370	6453
35°	8503	6747	5615
40°	8263	6062	4748
45°	8028	5344	3933
50°	7746	4547	3090
55°	7449	3694	2247
60°	7116	2754	1606
65°	6684	1817	1253
70°	6040	1265	878
75°	5252	819	683
80°	4120	611	558
85°	2125	503	406

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8028 cd/sqm



TEST NUMBER: P1056497

CATALOG NUMBER: S125R3DR-H1090D835-X4F0-XX-UDD-F-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.6	5.2
10°-20°	341.5	14.0
20°-30°	472.3	19.4
30°-40°	500.4	20.5
40°-50°	436.7	17.9
50°-60°	310.6	12.7
60°-70°	172.7	7.1
70°-80°	66.4	2.7
80°-90°	11.5	0.5
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°	939.4	38.5
0°-40°	1439.8	59.1
0°-60°	2187.1	89.7
0°-90°	2437.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2437.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1349	1349	1349	1349	1349	
5°	1332	1342	1329	1325	1331	126
15°	1268	1256	1208	1181	1175	357
25°	1146	1108	1015	953	929	528
35°	985	918	782	687	651	616
45°	803	707	534	427	393	619
55°	604	485	300	207	182	540
65°	400	262	109	80	75	395
75°	192	75	30	25	25	204
85°	26	8	6	5	5	39
90°	0	0	0	0	0	



TEST NUMBER: P1056497

CATALOG NUMBER: S125R3DR-H1090D835-X4F0-XX-UDD-F-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1348.8	1348.8	1348.8	1348.8	1348.8
2.5°	1338.8	1352.5	1341.3	1342.5	1343.8
5°	1332.5	1342.5	1328.8	1325.0	1331.3
7.5°	1322.5	1330.0	1306.3	1297.6	1301.3
10°	1307.5	1310.0	1277.6	1265.1	1263.8
12.5°	1288.8	1285.1	1245.1	1225.1	1223.9
15°	1267.6	1256.3	1207.6	1181.4	1175.2
17.5°	1241.4	1223.9	1163.9	1130.2	1120.2
20°	1211.4	1187.7	1119.0	1075.3	1059.0
22.5°	1181.4	1148.9	1069.0	1014.1	996.6
25°	1146.4	1107.7	1015.3	952.9	929.1
27.5°	1109.0	1062.8	960.4	887.9	859.2
30°	1070.3	1016.6	902.9	821.7	790.5
32.5°	1029.0	967.9	843.0	754.3	721.8
35°	985.3	917.9	781.8	686.9	650.6
37.5°	941.6	866.7	721.8	620.7	583.2
40°	895.4	814.2	656.9	553.2	514.5
42.5°	850.5	760.5	595.7	489.5	454.6
45°	803.0	706.8	534.5	427.1	393.4
47.5°	754.3	650.6	473.3	368.4	334.7
50°	704.3	595.7	413.4	311.0	281.0
52.5°	654.4	540.7	357.2	256.0	229.8
55°	604.4	484.6	299.7	207.3	182.3
57.5°	554.5	429.6	246.0	162.3	139.9
60°	503.3	373.4	194.8	119.9	113.6
62.5°	452.1	318.5	151.1	98.7	93.7
65°	399.6	262.3	108.6	79.9	74.9
67.5°	347.2	211.1	78.7	61.2	57.4
70°	292.2	161.1	61.2	46.2	42.5
72.5°	239.8	116.1	43.7	33.7	32.5
75°	192.3	74.9	30.0	25.0	25.0
77.5°	144.9	45.0	21.2	18.7	18.7
80°	101.2	26.2	15.0	13.7	13.7
82.5°	61.2	13.7	10.0	8.7	8.7
85°	26.2	7.5	6.2	5.0	5.0
87.5°	5.0	2.5	2.5	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1056497

CATALOG NUMBER: S125R3DR-H1090D835-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	19.00	20.44	19.36	20.75	21.07	11.63	13.08	12.00	13.39	13.71
	3H	20.56	21.84	20.93	22.17	22.53	12.20	13.48	12.57	13.81	14.17
	4H	21.08	22.28	21.48	22.63	23.01	12.32	13.52	12.72	13.87	14.25
	6H	21.41	22.52	21.83	22.89	23.28	12.39	13.49	12.80	13.86	14.25
	8H	21.50	22.55	21.92	22.94	23.34	12.39	13.44	12.82	13.83	14.23
	12H	21.52	22.53	21.95	22.91	23.34	12.38	13.39	12.81	13.77	14.20
4H	2H	18.89	20.09	19.29	20.44	20.82	12.20	13.40	12.60	13.75	14.13
	3H	20.56	21.55	20.97	21.95	22.35	12.87	13.86	13.28	14.26	14.66
	4H	21.11	21.99	21.54	22.41	22.85	13.03	13.91	13.46	14.33	14.77
	6H	21.50	22.27	21.96	22.71	23.17	13.14	13.90	13.60	14.35	14.81
	8H	21.61	22.32	22.07	22.76	23.23	13.15	13.86	13.62	14.31	14.78
	12H	21.65	22.29	22.14	22.77	23.24	13.15	13.78	13.64	14.27	14.74
8H	4H	21.01	21.72	21.48	22.17	22.64	13.30	14.01	13.76	14.46	14.92
	6H	21.40	21.98	21.90	22.48	22.96	13.43	14.01	13.93	14.51	14.99
	8H	21.51	22.03	22.02	22.54	23.03	13.46	13.98	13.98	14.49	14.98
	12H	21.57	22.03	22.08	22.53	23.09	13.48	13.94	13.99	14.44	15.00
12H	4H	20.98	21.61	21.46	22.09	22.56	13.31	13.95	13.80	14.43	14.90
	6H	21.35	21.87	21.86	22.38	22.87	13.44	13.97	13.96	14.48	14.97
	8H	21.47	21.94	21.99	22.43	23.00	13.50	13.96	14.01	14.46	15.03