

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: P1056500

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056500
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-H1090D840-X4F0-XX-UDD-F-S
Description: DEFINE 5, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

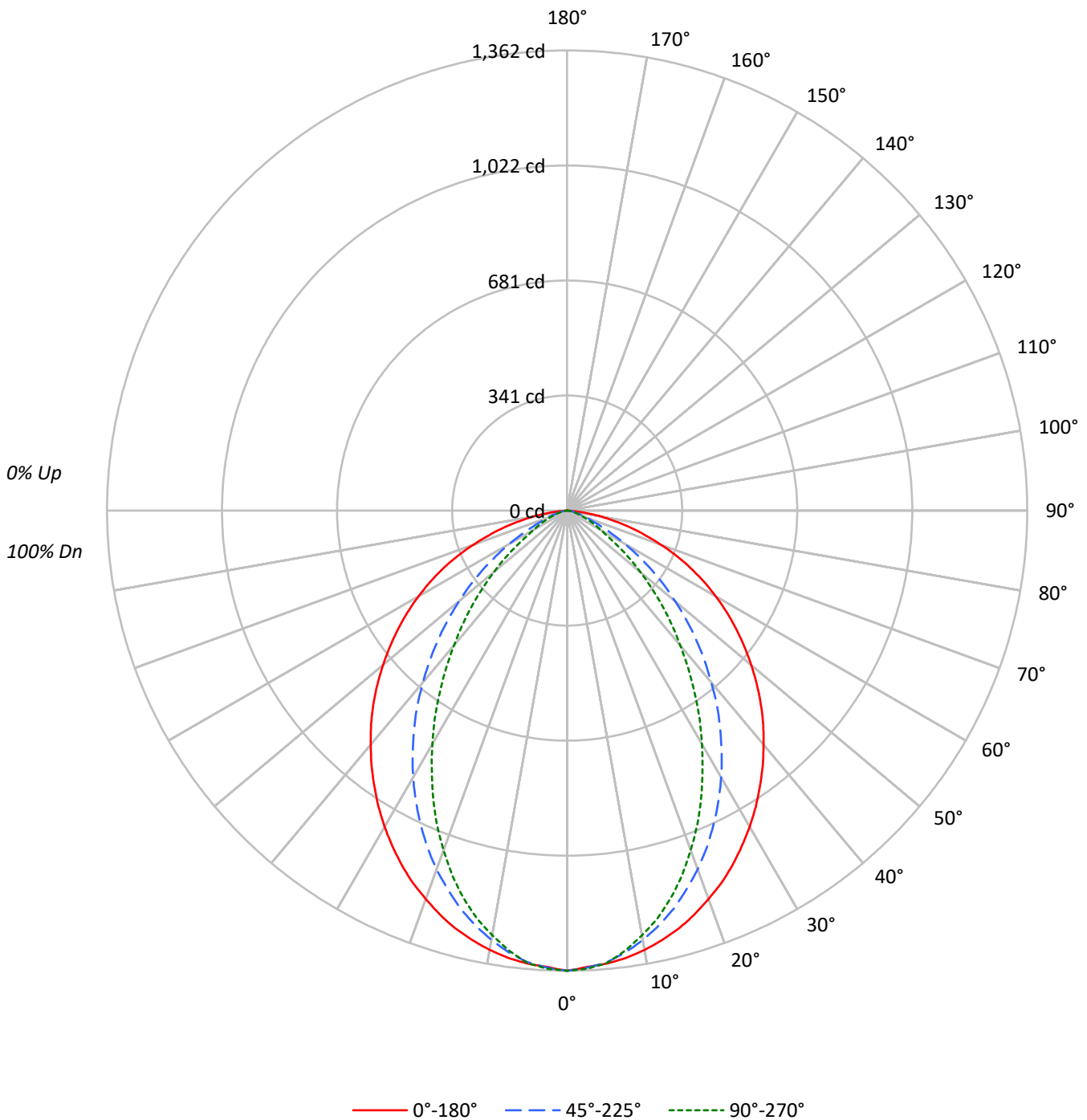
Lumens per Lamp: N/A
Luminaire Lumens: 2461.8 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot





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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9629	9629	9629
5°	9550	9523	9540
10°	9478	9262	9162
15°	9369	8925	8686
20°	9203	8501	8046
25°	9031	7997	7319
30°	8823	7443	6516
35°	8588	6813	5671
40°	8345	6122	4795
45°	8107	5397	3972
50°	7823	4591	3121
55°	7523	3731	2269
60°	7185	2781	1623
65°	6751	1835	1266
70°	6100	1277	887
75°	5304	828	688
80°	4161	615	566
85°	2149	511	406

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8107 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.9	5.2
10°-20°	344.9	14.0
20°-30°	476.9	19.4
30°-40°	505.3	20.5
40°-50°	441.0	17.9
50°-60°	313.7	12.7
60°-70°	174.4	7.1
70°-80°	67.1	2.7
80°-90°	11.6	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°	948.7	38.5
0°-40°	1454.0	59.1
0°-60°	2208.7	89.7
0°-90°	2461.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2461.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1362	1362	1362	1362	1362	
5°	1346	1356	1342	1338	1344	128
15°	1280	1269	1220	1193	1187	361
25°	1158	1119	1025	962	938	533
35°	995	927	790	694	657	623
45°	811	714	540	431	397	625
55°	610	489	303	209	184	546
65°	404	265	110	81	76	399
75°	194	76	30	25	25	206
85°	26	8	6	5	5	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1362.1	1362.1	1362.1	1362.1	1362.1
2.5°	1352.0	1365.8	1354.5	1355.8	1357.0
5°	1345.7	1355.8	1341.9	1338.1	1344.4
7.5°	1335.6	1343.1	1319.2	1310.4	1314.1
10°	1320.4	1323.0	1290.2	1277.6	1276.3
12.5°	1301.5	1297.7	1257.4	1237.2	1235.9
15°	1280.1	1268.7	1219.5	1193.1	1186.8
17.5°	1253.6	1235.9	1175.4	1141.4	1131.3
20°	1223.3	1199.4	1130.0	1085.9	1069.5
22.5°	1193.1	1160.3	1079.6	1024.1	1006.4
25°	1157.8	1118.7	1025.3	962.3	938.3
27.5°	1119.9	1073.3	969.8	896.7	867.7
30°	1080.8	1026.6	911.8	829.8	798.3
32.5°	1039.2	977.4	851.3	761.7	729.0
35°	995.1	927.0	789.5	693.6	657.1
37.5°	950.9	875.2	729.0	626.8	589.0
40°	904.3	822.3	663.4	558.7	519.6
42.5°	858.9	768.0	601.6	494.4	459.1
45°	810.9	713.8	539.8	431.3	397.3
47.5°	761.7	657.1	478.0	372.0	338.0
50°	711.3	601.6	417.4	314.0	283.8
52.5°	660.9	546.1	360.7	258.5	232.1
55°	610.4	489.3	302.7	209.4	184.1
57.5°	560.0	433.8	248.4	164.0	141.3
60°	508.2	377.1	196.7	121.1	114.8
62.5°	456.5	321.6	152.6	99.6	94.6
65°	403.6	264.8	109.7	80.7	75.7
67.5°	350.6	213.1	79.5	61.8	58.0
70°	295.1	162.7	61.8	46.7	42.9
72.5°	242.1	117.3	44.1	34.1	32.8
75°	194.2	75.7	30.3	25.2	25.2
77.5°	146.3	45.4	21.4	18.9	18.9
80°	102.2	26.5	15.1	13.9	13.9
82.5°	61.8	13.9	10.1	8.8	8.8
85°	26.5	7.6	6.3	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



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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	19.03	20.47	19.39	20.79	21.10	11.67	13.11	12.03	13.43	13.74
	3H	20.59	21.88	20.97	22.20	22.57	12.23	13.52	12.61	13.85	14.21
	4H	21.11	22.31	21.51	22.66	23.04	12.36	13.56	12.76	13.91	14.29
	6H	21.45	22.55	21.86	22.92	23.32	12.42	13.53	12.84	13.90	14.29
	8H	21.53	22.58	21.96	22.97	23.37	12.43	13.48	12.86	13.87	14.27
	12H	21.55	22.56	21.99	22.94	23.37	12.42	13.42	12.85	13.81	14.23
4H	2H	18.93	20.13	19.33	20.48	20.86	12.23	13.44	12.64	13.79	14.17
	3H	20.59	21.58	21.00	21.98	22.38	12.91	13.89	13.32	14.30	14.70
	4H	21.14	22.03	21.58	22.44	22.88	13.06	13.95	13.50	14.36	14.81
	6H	21.54	22.30	22.00	22.74	23.21	13.18	13.94	13.64	14.38	14.85
	8H	21.64	22.35	22.11	22.80	23.27	13.19	13.90	13.65	14.35	14.81
	12H	21.69	22.32	22.17	22.80	23.27	13.19	13.82	13.67	14.30	14.77
8H	4H	21.05	21.76	21.51	22.20	22.67	13.33	14.05	13.80	14.49	14.96
	6H	21.43	22.02	21.93	22.51	22.99	13.47	14.05	13.97	14.55	15.02
	8H	21.54	22.06	22.06	22.58	23.07	13.49	14.02	14.01	14.53	15.02
	12H	21.60	22.07	22.12	22.56	23.13	13.52	13.98	14.03	14.47	15.04
12H	4H	21.01	21.64	21.49	22.12	22.60	13.35	13.98	13.83	14.46	14.93
	6H	21.38	21.90	21.90	22.42	22.91	13.48	14.00	14.00	14.52	15.01
	8H	21.51	21.97	22.02	22.46	23.03	13.54	14.00	14.05	14.49	15.06