

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: P1056501

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056501
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-H1090D840-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, 80 CRI LEDS
Ballast/Driver: -

Summary

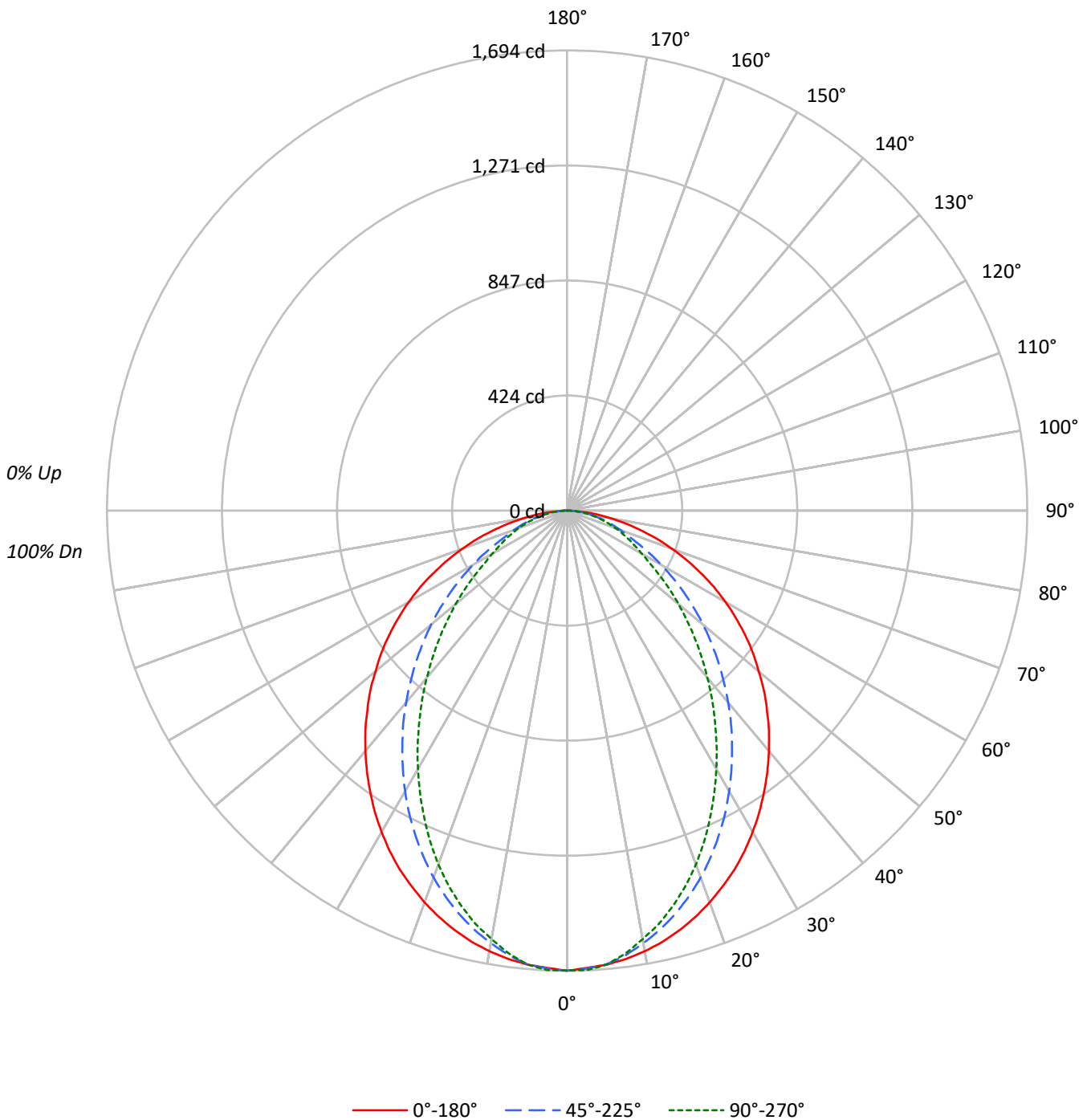
Lumens per Lamp: N/A
Luminaire Lumens: 3589.9 lumens
Efficiency: N/A
Efficacy: 116.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11973	11973	11973
5°	11903	11894	11903
10°	11824	11606	11498
15°	11704	11252	11021
20°	11546	10816	10427
25°	11372	10299	9719
30°	11149	9739	8967
35°	10906	9131	8185
40°	10661	8508	7414
45°	10402	7855	6644
50°	10126	7185	5881
55°	9870	6451	5114
60°	9522	5671	4493
65°	9050	4809	4177
70°	8497	4301	3911
75°	7681	3961	3685
80°	6677	3595	3440
85°	5215	3171	3171

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10402 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.5	4.4
10°-20°	435.1	12.1
20°-30°	614.7	17.1
30°-40°	676.7	18.8
40°-50°	631.2	17.6
50°-60°	503.9	14.0
60°-70°	339.1	9.4
70°-80°	180.6	5.0
80°-90°	50.2	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°	1208.3	33.7
0°-40°	1884.9	52.5
0°-60°	3020.0	84.1
0°-90°	3589.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3589.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1694	1694	1694	1694	1694	
5°	1677	1691	1676	1671	1677	159
15°	1599	1590	1537	1511	1506	451
25°	1458	1414	1320	1262	1246	671
35°	1264	1189	1058	975	948	791
45°	1040	942	786	690	665	803
55°	801	680	523	440	415	715
65°	541	422	288	255	250	537
75°	281	187	145	136	135	300
85°	64	44	39	40	39	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1693.7	1693.7	1693.7	1693.7	1693.7
2.5°	1684.9	1698.8	1687.4	1690.0	1692.5
5°	1677.4	1691.2	1676.1	1671.0	1677.4
7.5°	1664.7	1676.1	1650.9	1639.5	1644.6
10°	1647.1	1654.7	1616.8	1601.7	1601.7
12.5°	1625.6	1625.6	1580.2	1558.8	1558.8
15°	1599.2	1590.3	1537.4	1510.9	1505.8
17.5°	1568.9	1552.5	1489.4	1455.4	1449.1
20°	1534.8	1508.4	1437.7	1393.6	1386.0
22.5°	1497.0	1463.0	1381.0	1326.7	1317.9
25°	1457.9	1413.8	1320.4	1262.4	1246.0
27.5°	1413.8	1360.8	1258.6	1193.1	1172.9
30°	1365.8	1305.3	1193.1	1119.9	1098.5
32.5°	1316.7	1248.6	1126.2	1048.0	1024.1
35°	1263.7	1189.3	1058.1	974.9	948.4
37.5°	1210.7	1130.0	991.3	904.3	876.5
40°	1155.2	1066.9	921.9	832.4	803.4
42.5°	1099.7	1005.1	853.8	763.0	732.7
45°	1040.5	942.1	785.7	689.9	664.6
47.5°	983.7	877.8	718.9	625.5	597.8
50°	920.7	810.9	653.3	560.0	534.7
52.5°	862.6	745.3	587.7	500.7	474.2
55°	800.8	679.8	523.4	440.1	414.9
57.5°	736.5	614.2	461.6	383.4	359.4
60°	673.5	548.6	401.1	329.2	317.8
62.5°	609.1	486.8	344.3	288.8	281.2
65°	541.0	422.5	287.5	254.8	249.7
67.5°	476.7	360.7	242.1	223.2	218.2
70°	411.1	298.9	208.1	191.7	189.2
72.5°	346.8	239.6	175.3	164.0	161.4
75°	281.2	186.7	145.0	136.2	134.9
77.5°	220.7	140.0	114.8	111.0	108.5
80°	164.0	104.7	88.3	85.8	84.5
82.5°	112.2	71.9	63.1	63.1	60.5
85°	64.3	44.1	39.1	40.4	39.1
87.5°	24.0	18.9	17.7	18.9	18.9
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	19.91	21.45	20.28	21.77	22.08	16.30	17.84	16.66	18.15	18.46
	3H	21.70	23.08	22.08	23.41	23.77	17.77	19.16	18.15	19.48	19.85
	4H	22.35	23.65	22.75	24.00	24.38	18.36	19.66	18.76	20.01	20.39
	6H	22.83	24.03	23.24	24.40	24.79	18.83	20.03	19.24	20.39	20.78
	8H	22.98	24.13	23.41	24.52	24.92	18.99	20.13	19.41	20.52	20.92
	12H	23.08	24.17	23.51	24.56	24.99	19.10	20.20	19.53	20.58	21.01
4H	2H	20.05	21.35	20.45	21.70	22.07	16.97	18.27	17.37	18.62	19.00
	3H	22.02	23.10	22.43	23.50	23.90	18.65	19.73	19.06	20.13	20.53
	4H	22.76	23.74	23.20	24.15	24.59	19.35	20.33	19.79	20.74	21.18
	6H	23.36	24.21	23.82	24.65	25.11	19.94	20.79	20.40	21.23	21.69
	8H	23.56	24.36	24.03	24.80	25.27	20.15	20.94	20.61	21.38	21.85
	12H	23.71	24.42	24.19	24.90	25.37	20.31	21.02	20.79	21.50	21.97
8H	4H	22.83	23.62	23.29	24.06	24.53	19.72	20.51	20.18	20.95	21.42
	6H	23.49	24.14	23.98	24.63	25.11	20.42	21.08	20.92	21.57	22.04
	8H	23.74	24.33	24.25	24.84	25.33	20.70	21.29	21.22	21.80	22.29
	12H	23.95	24.47	24.46	24.96	25.53	20.95	21.47	21.45	21.96	22.52
12H	4H	22.82	23.53	23.30	24.01	24.48	19.77	20.47	20.25	20.95	21.42
	6H	23.48	24.07	23.99	24.58	25.07	20.49	21.08	21.00	21.59	22.08
	8H	23.78	24.30	24.28	24.79	25.35	20.83	21.36	21.34	21.85	22.41