

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: P1056504

Luminaire Tested: S125R3DR-H1090D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056504
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-H1090D850-X4F0-XX-UDD-F-W
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

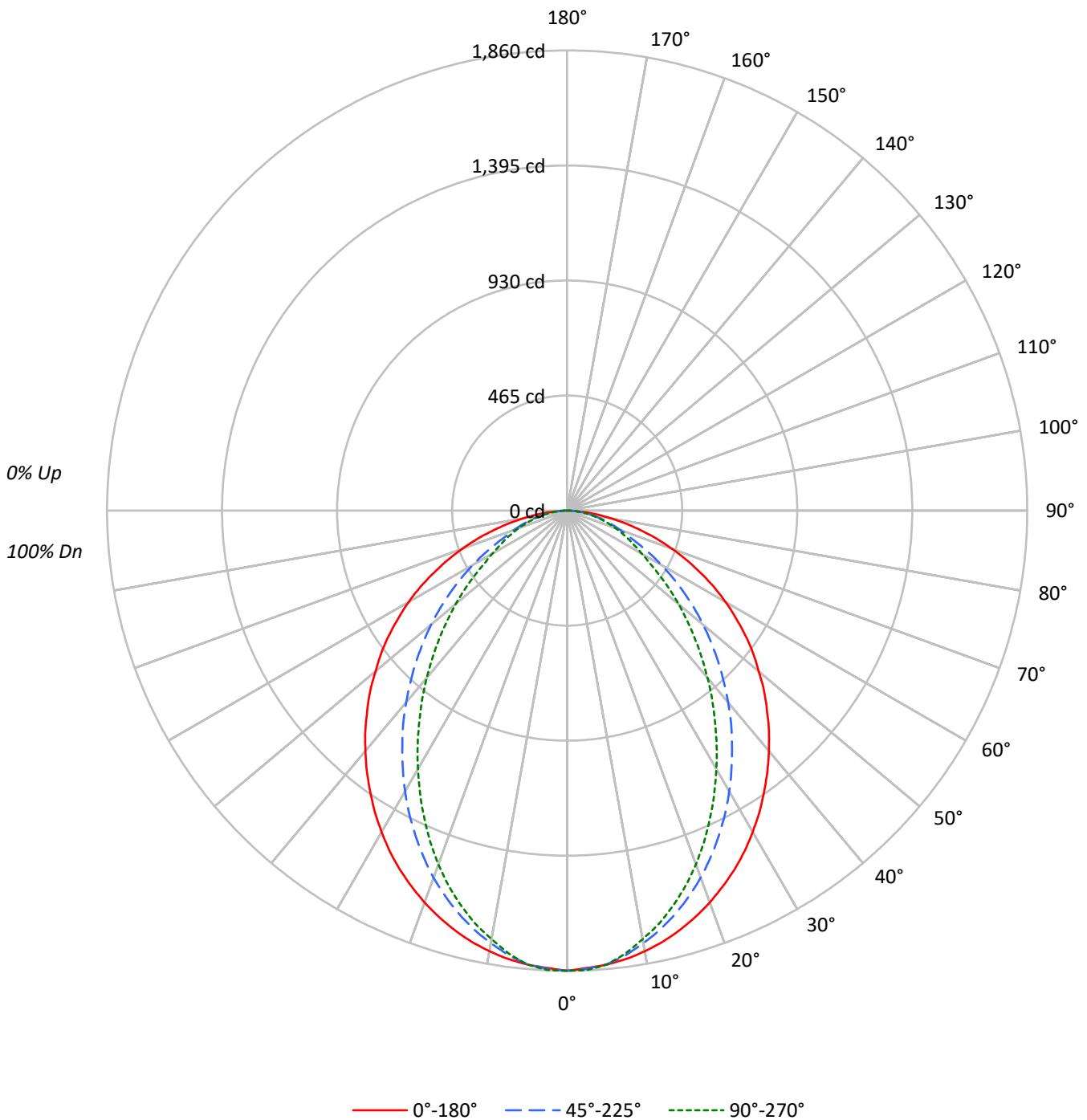
Lumens per Lamp: N/A
Luminaire Lumens: 3942.2 lumens
Efficiency: N/A
Efficacy: 127.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
Input Voltage (V): 120
Input Current (Ain): 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	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	30	42	35	30	41	35	30	40	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13149	13149	13149
5°	13071	13062	13071
10°	12984	12745	12626
15°	12852	12356	12103
20°	12680	11878	11451
25°	12488	11311	10674
30°	12244	10695	9847
35°	11976	10028	8988
40°	11707	9343	8141
45°	11423	8626	7297
50°	11119	7890	6458
55°	10840	7084	5617
60°	10457	6227	4934
65°	9939	5283	4587
70°	9332	4723	4293
75°	8435	4351	4048
80°	7328	3945	3778
85°	5726	3480	3480

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11423 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.0	4.4
10°-20°	477.8	12.1
20°-30°	675.0	17.1
30°-40°	743.1	18.8
40°-50°	693.1	17.6
50°-60°	553.3	14.0
60°-70°	372.4	9.4
70°-80°	198.3	5.0
80°-90°	55.1	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°	1326.9	33.7
0°-40°	2070.0	52.5
0°-60°	3316.4	84.1
0°-90°	3942.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3942.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1860	1860	1860	1860	1860	
5°	1842	1857	1841	1835	1842	175
15°	1756	1746	1688	1659	1654	495
25°	1601	1553	1450	1386	1368	737
35°	1388	1306	1162	1071	1042	868
45°	1143	1035	863	758	730	882
55°	880	746	575	483	456	785
65°	594	464	316	280	274	589
75°	309	205	159	150	148	329
85°	71	48	43	44	43	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1860.0	1860.0	1860.0	1860.0	1860.0
2.5°	1850.3	1865.6	1853.1	1855.9	1858.6
5°	1842.0	1857.2	1840.6	1835.1	1842.0
7.5°	1828.2	1840.6	1812.9	1800.5	1806.0
10°	1808.8	1817.1	1775.5	1758.9	1758.9
12.5°	1785.2	1785.2	1735.4	1711.8	1711.8
15°	1756.1	1746.4	1688.3	1659.2	1653.7
17.5°	1722.9	1704.9	1635.6	1598.3	1591.3
20°	1685.5	1656.4	1578.9	1530.4	1522.1
22.5°	1644.0	1606.6	1516.5	1457.0	1447.3
25°	1601.0	1552.6	1450.1	1386.4	1368.4
27.5°	1552.6	1494.4	1382.2	1310.2	1288.0
30°	1499.9	1433.4	1310.2	1229.9	1206.3
32.5°	1445.9	1371.1	1236.8	1150.9	1124.6
35°	1387.7	1306.0	1162.0	1070.6	1041.5
37.5°	1329.6	1240.9	1088.6	993.0	962.6
40°	1268.6	1171.7	1012.4	914.1	882.2
42.5°	1207.7	1103.8	937.6	837.9	804.7
45°	1142.6	1034.6	862.8	757.6	729.9
47.5°	1080.3	963.9	789.4	686.9	656.5
50°	1011.0	890.5	717.4	614.9	587.2
52.5°	947.3	818.5	645.4	549.8	520.7
55°	879.5	746.5	574.8	483.4	455.7
57.5°	808.8	674.5	506.9	421.0	394.7
60°	739.6	602.5	440.4	361.5	349.0
62.5°	668.9	534.6	378.1	317.2	308.8
65°	594.2	464.0	315.8	279.8	274.2
67.5°	523.5	396.1	265.9	245.1	239.6
70°	451.5	328.2	228.5	210.5	207.7
72.5°	380.9	263.1	192.5	180.0	177.3
75°	308.8	205.0	159.3	149.6	148.2
77.5°	242.4	153.7	126.0	121.9	119.1
80°	180.0	115.0	96.9	94.2	92.8
82.5°	123.3	78.9	69.2	69.2	66.5
85°	70.6	48.5	42.9	44.3	42.9
87.5°	26.3	20.8	19.4	20.8	20.8
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	20.24	21.78	20.60	22.09	22.41	16.62	18.16	16.99	18.47	18.79
	3H	22.02	23.41	22.40	23.74	24.10	18.10	19.48	18.47	19.81	20.17
	4H	22.68	23.98	23.08	24.33	24.70	18.69	19.99	19.09	20.34	20.71
	6H	23.15	24.36	23.57	24.72	25.11	19.15	20.35	19.56	20.72	21.11
	8H	23.31	24.45	23.73	24.84	25.24	19.31	20.45	19.74	20.84	21.25
	12H	23.40	24.50	23.83	24.88	25.31	19.43	20.52	19.86	20.90	21.33
4H	2H	20.37	21.67	20.77	22.02	22.40	17.30	18.60	17.70	18.95	19.32
	3H	22.34	23.42	22.75	23.82	24.23	18.98	20.06	19.39	20.46	20.86
	4H	23.09	24.06	23.52	24.48	24.92	19.68	20.65	20.11	21.07	21.51
	6H	23.68	24.53	24.14	24.97	25.43	20.26	21.11	20.72	21.55	22.01
	8H	23.89	24.68	24.35	25.13	25.59	20.47	21.27	20.94	21.71	22.18
	12H	24.04	24.75	24.52	25.22	25.70	20.63	21.34	21.12	21.82	22.29
8H	4H	23.15	23.95	23.62	24.39	24.86	20.04	20.84	20.51	21.28	21.75
	6H	23.81	24.47	24.31	24.96	25.44	20.74	21.40	21.24	21.89	22.37
	8H	24.07	24.66	24.58	25.16	25.65	21.03	21.62	21.54	22.13	22.61
	12H	24.27	24.80	24.78	25.29	25.85	21.27	21.79	21.78	22.28	22.85
12H	4H	23.15	23.85	23.63	24.33	24.80	20.09	20.80	20.57	21.28	21.75
	6H	23.81	24.40	24.32	24.91	25.39	20.82	21.41	21.33	21.92	22.40
	8H	24.10	24.62	24.61	25.11	25.68	21.16	21.68	21.67	22.17	22.74