

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: P1055990

Luminaire Tested: S124R3DR-S1195D850-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055990
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S1195D850-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

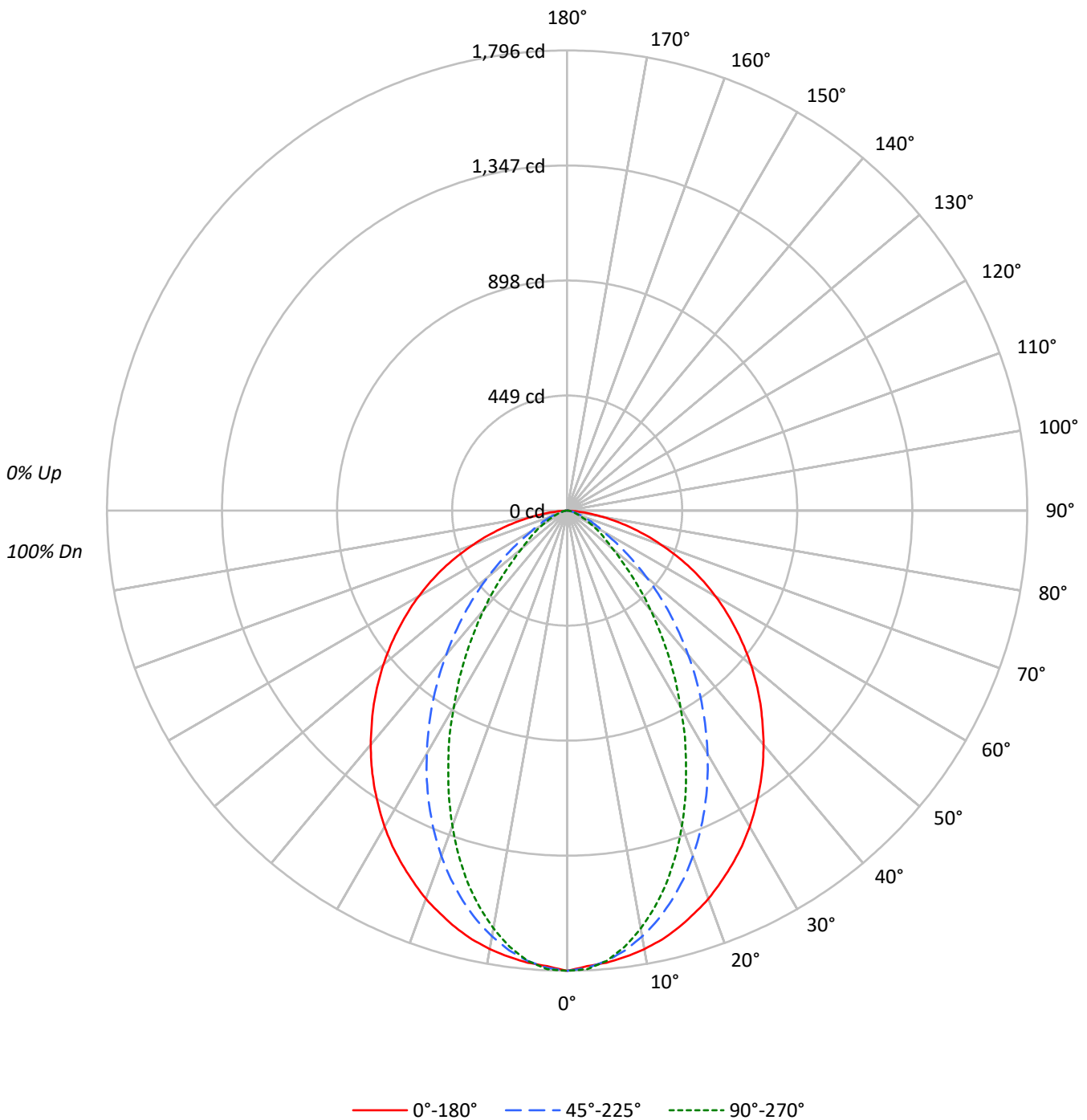
Lumens per Lamp: N/A
Luminaire Lumens: 2904.5 lumens
Efficiency: N/A
Efficacy: 69.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15882	15882	15882
5°	15720	15660	15660
10°	15602	15151	14865
15°	15416	14421	13747
20°	15170	13502	12322
25°	14864	12417	10704
30°	14548	11184	9016
35°	14171	9875	7419
40°	13763	8474	5849
45°	13343	7047	4371
50°	12883	5545	3198
55°	12375	4099	2553
60°	11830	2840	1952
65°	11128	2205	1435
70°	10074	1556	1124
75°	8800	1086	857
80°	7067	850	769
85°	3906	680	680

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13343 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.6	5.7
10°-20°	445.2	15.3
20°-30°	593.8	20.4
30°-40°	597.9	20.6
40°-50°	490.3	16.9
50°-60°	335.1	11.5
60°-70°	187.3	6.4
70°-80°	74.3	2.6
80°-90°	14.1	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°	1205.6	41.5
0°-40°	1803.5	62.1
0°-60°	2628.9	90.5
0°-90°	2904.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2904.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1796	1796	1796	1796	1796	
5°	1771	1791	1764	1756	1764	168
15°	1684	1666	1576	1520	1502	475
25°	1524	1448	1273	1144	1097	702
35°	1313	1174	915	741	687	821
45°	1067	871	564	396	350	823
55°	803	564	266	177	166	718
65°	532	268	105	75	69	526
75°	258	70	32	27	25	276
85°	38	7	7	7	7	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1796.3	1796.3	1796.3	1796.3	1796.3
2.5°	1779.6	1801.3	1786.3	1787.9	1791.3
5°	1771.2	1791.3	1764.5	1756.2	1764.5
7.5°	1756.2	1771.2	1731.1	1714.4	1717.7
10°	1737.8	1742.8	1687.6	1659.2	1655.8
12.5°	1714.4	1707.7	1635.7	1593.9	1583.9
15°	1684.2	1665.9	1575.5	1520.3	1501.9
17.5°	1649.1	1617.3	1508.6	1436.7	1410.0
20°	1612.3	1565.5	1435.0	1343.1	1309.6
22.5°	1568.8	1510.3	1356.4	1244.4	1205.9
25°	1523.7	1448.4	1272.8	1144.0	1097.2
27.5°	1476.9	1384.9	1185.8	1042.0	995.2
30°	1425.0	1316.3	1095.5	940.0	883.1
32.5°	1369.8	1246.0	1005.2	839.6	786.1
35°	1312.9	1174.1	914.9	740.9	687.4
37.5°	1254.4	1100.5	824.6	647.3	593.8
40°	1192.5	1025.3	734.2	558.6	506.8
42.5°	1129.0	948.3	647.3	475.0	426.5
45°	1067.1	871.4	563.6	396.4	349.6
47.5°	1001.9	794.5	481.7	322.8	282.7
50°	936.6	717.5	403.1	259.2	232.5
52.5°	869.7	640.6	331.2	212.4	194.0
55°	802.8	563.6	265.9	177.3	165.6
57.5°	735.9	486.7	205.7	150.5	137.1
60°	669.0	411.4	160.6	122.1	110.4
62.5°	600.4	336.2	132.1	97.0	87.0
65°	531.9	267.6	105.4	75.3	68.6
67.5°	463.3	204.1	80.3	58.5	53.5
70°	389.7	145.5	60.2	45.2	43.5
72.5°	326.1	98.7	43.5	35.1	33.5
75°	257.6	70.2	31.8	26.8	25.1
77.5°	199.0	45.2	23.4	21.7	20.1
80°	138.8	25.1	16.7	15.1	15.1
82.5°	85.3	13.4	11.7	10.0	10.0
85°	38.5	6.7	6.7	6.7	6.7
87.5°	6.7	3.3	3.3	3.3	3.3
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	20.33	21.74	20.70	22.05	22.37	11.42	12.83	11.78	13.14	13.45
	3H	21.92	23.17	22.30	23.50	23.86	12.01	13.26	12.39	13.59	13.96
	4H	22.51	23.68	22.91	24.03	24.41	12.17	13.34	12.57	13.69	14.07
	6H	22.94	24.02	23.36	24.39	24.78	12.28	13.35	12.69	13.72	14.11
	8H	23.06	24.08	23.49	24.47	24.87	12.30	13.32	12.73	13.71	14.11
	12H	23.10	24.08	23.53	24.46	24.89	12.30	13.28	12.74	13.66	14.09
4H	2H	20.19	21.35	20.59	21.70	22.09	12.00	13.17	12.40	13.52	13.90
	3H	21.83	22.79	22.24	23.19	23.60	12.72	13.68	13.13	14.08	14.48
	4H	22.44	23.30	22.87	23.71	24.16	12.92	13.78	13.35	14.20	14.64
	6H	22.93	23.67	23.39	24.12	24.58	13.09	13.83	13.55	14.27	14.74
	8H	23.07	23.77	23.54	24.21	24.68	13.12	13.81	13.59	14.26	14.73
	12H	23.15	23.76	23.63	24.24	24.71	13.15	13.76	13.63	14.24	14.71
8H	4H	22.33	23.02	22.80	23.47	23.94	13.19	13.88	13.66	14.33	14.80
	6H	22.81	23.38	23.31	23.87	24.35	13.40	13.96	13.90	14.46	14.94
	8H	22.96	23.47	23.48	23.98	24.47	13.45	13.96	13.97	14.47	14.97
	12H	23.05	23.50	23.56	23.99	24.56	13.51	13.96	14.03	14.45	15.02
12H	4H	22.29	22.91	22.78	23.39	23.86	13.22	13.83	13.70	14.31	14.79
	6H	22.76	23.27	23.28	23.78	24.27	13.43	13.93	13.94	14.45	14.94
	8H	22.92	23.37	23.44	23.86	24.43	13.52	13.97	14.03	14.46	15.03