

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: P1056141

Luminaire Tested: S124R3DR-H1195D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056141
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H1195D950-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

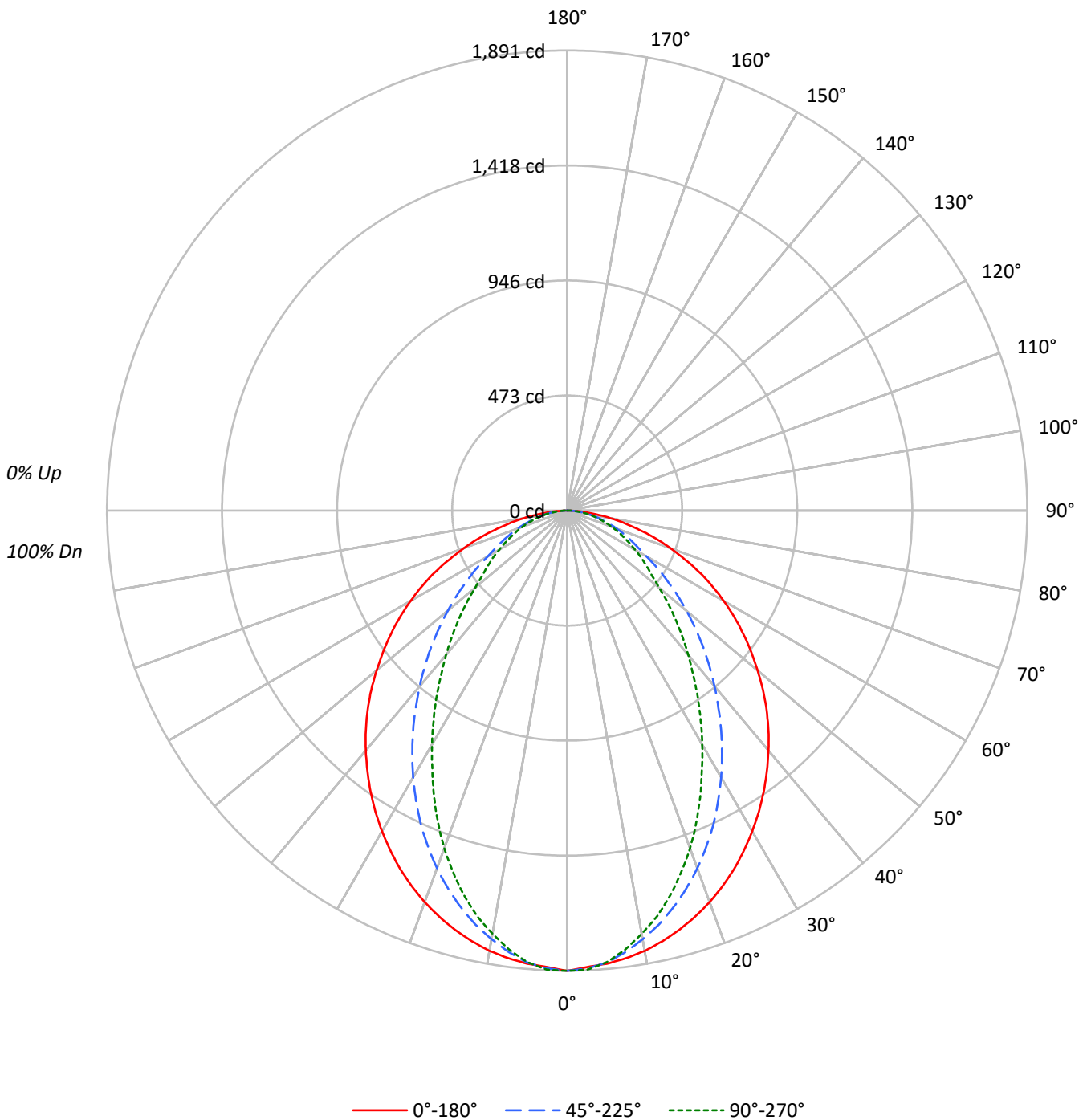
Lumens per Lamp: N/A
Luminaire Lumens: 3767.2 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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	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	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88					86				
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76					73				
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65					63				
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57					55				
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51					49				
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45					43				
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41					39				
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37					35				
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34					32				
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31					29				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16723	16723	16723
5°	16589	16552	16540
10°	16493	16056	15857
15°	16319	15453	14981
20°	16107	14719	13894
25°	15845	13876	12627
30°	15530	12916	11338
35°	15202	11913	10095
40°	14859	10874	8931
45°	14495	9867	7849
50°	14052	8806	6777
55°	13623	7744	6157
60°	13142	6645	5710
65°	12550	6027	5328
70°	11656	5576	5036
75°	10556	5134	4755
80°	9211	4745	4465
85°	7060	4372	4098

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14495 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.1	4.7
10°-20°	477.7	12.7
20°-30°	661.4	17.6
30°-40°	709.9	18.8
40°-50°	645.6	17.1
50°-60°	508.4	13.5
60°-70°	348.0	9.2
70°-80°	187.3	5.0
80°-90°	53.0	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°	1315.1	34.9
0°-40°	2025.0	53.8
0°-60°	3178.9	84.4
0°-90°	3767.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3767.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1891	1891	1891	1891	1891	
5°	1869	1890	1865	1855	1864	177
15°	1783	1763	1688	1642	1637	503
25°	1624	1557	1422	1319	1294	748
35°	1408	1298	1104	970	935	881
45°	1159	1012	789	653	628	894
55°	884	715	502	405	399	790
65°	600	429	288	256	255	592
75°	309	188	150	138	139	330
85°	70	47	43	40	40	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1891.4	1891.4	1891.4	1891.4	1891.4
2.5°	1877.5	1899.8	1883.1	1885.9	1888.6
5°	1869.2	1890.0	1865.0	1855.2	1863.6
7.5°	1855.2	1869.2	1830.2	1812.1	1820.4
10°	1837.1	1839.9	1788.4	1762.0	1766.2
12.5°	1812.1	1805.1	1742.5	1704.9	1707.7
15°	1782.9	1763.4	1688.2	1642.3	1636.7
17.5°	1749.5	1717.5	1628.4	1569.9	1558.8
20°	1711.9	1668.7	1564.4	1489.2	1476.7
22.5°	1670.1	1614.5	1494.8	1405.7	1387.6
25°	1624.2	1557.4	1422.4	1319.4	1294.4
27.5°	1574.1	1496.2	1344.5	1231.7	1199.7
30°	1521.2	1432.1	1265.1	1144.0	1110.6
32.5°	1466.9	1366.7	1184.4	1056.4	1021.6
35°	1408.5	1298.5	1103.7	970.1	935.3
37.5°	1348.6	1227.5	1021.6	886.6	850.4
40°	1287.4	1156.6	942.2	803.1	773.8
42.5°	1224.8	1084.2	864.3	725.1	698.7
45°	1159.3	1011.8	789.1	652.7	627.7
47.5°	1092.5	938.1	712.6	584.5	560.9
50°	1021.6	864.3	640.2	517.7	492.7
52.5°	953.4	789.1	570.6	452.3	439.8
55°	883.8	715.4	502.4	405.0	399.4
57.5°	814.2	641.6	439.8	367.4	361.9
60°	743.2	569.2	375.8	328.5	322.9
62.5°	672.2	498.3	328.5	290.9	288.1
65°	599.9	428.7	288.1	256.1	254.7
67.5°	523.3	361.9	251.9	225.5	224.1
70°	450.9	295.1	215.7	194.8	194.8
72.5°	382.7	233.8	182.3	165.6	165.6
75°	309.0	187.9	150.3	137.8	139.2
77.5°	243.6	147.5	121.1	112.7	112.7
80°	180.9	110.0	93.2	86.3	87.7
82.5°	122.5	76.5	66.8	62.6	62.6
85°	69.6	47.3	43.1	40.4	40.4
87.5°	25.1	22.3	20.9	18.1	19.5
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	20.93	22.45	21.29	22.77	23.08	16.71	18.23	17.07	18.54	18.86
	3H	22.70	24.07	23.08	24.40	24.76	18.32	19.69	18.69	20.01	20.38
	4H	23.37	24.66	23.77	25.01	25.39	18.95	20.23	19.35	20.58	20.96
	6H	23.88	25.07	24.30	25.44	25.83	19.45	20.64	19.86	21.00	21.39
	8H	24.05	25.18	24.47	25.57	25.97	19.62	20.75	20.04	21.14	21.54
	12H	24.15	25.23	24.58	25.61	26.04	19.74	20.82	20.17	21.21	21.64
4H	2H	21.02	22.31	21.42	22.66	23.04	17.42	18.71	17.82	19.06	19.44
	3H	22.97	24.04	23.38	24.44	24.84	19.23	20.30	19.64	20.70	21.10
	4H	23.72	24.69	24.16	25.10	25.54	19.97	20.93	20.40	21.35	21.79
	6H	24.36	25.20	24.82	25.64	26.10	20.58	21.42	21.04	21.87	22.33
	8H	24.58	25.36	25.04	25.81	26.27	20.80	21.59	21.26	22.03	22.50
	12H	24.73	25.43	25.21	25.91	26.38	20.97	21.67	21.45	22.15	22.62
8H	4H	23.78	24.57	24.24	25.01	25.48	20.36	21.14	20.82	21.59	22.05
	6H	24.48	25.13	24.98	25.62	26.10	21.09	21.74	21.58	22.23	22.71
	8H	24.75	25.33	25.26	25.84	26.33	21.38	21.96	21.89	22.47	22.96
	12H	24.97	25.48	25.48	25.97	26.54	21.62	22.14	22.13	22.63	23.19
12H	4H	23.77	24.47	24.25	24.95	25.42	20.41	21.11	20.89	21.59	22.06
	6H	24.47	25.06	24.99	25.57	26.05	21.17	21.75	21.68	22.26	22.75
	8H	24.78	25.30	25.29	25.79	26.35	21.52	22.04	22.03	22.53	23.09