

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: P1055988

Luminaire Tested: S124R3DR-S1195D840-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055988
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-S1195D840-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

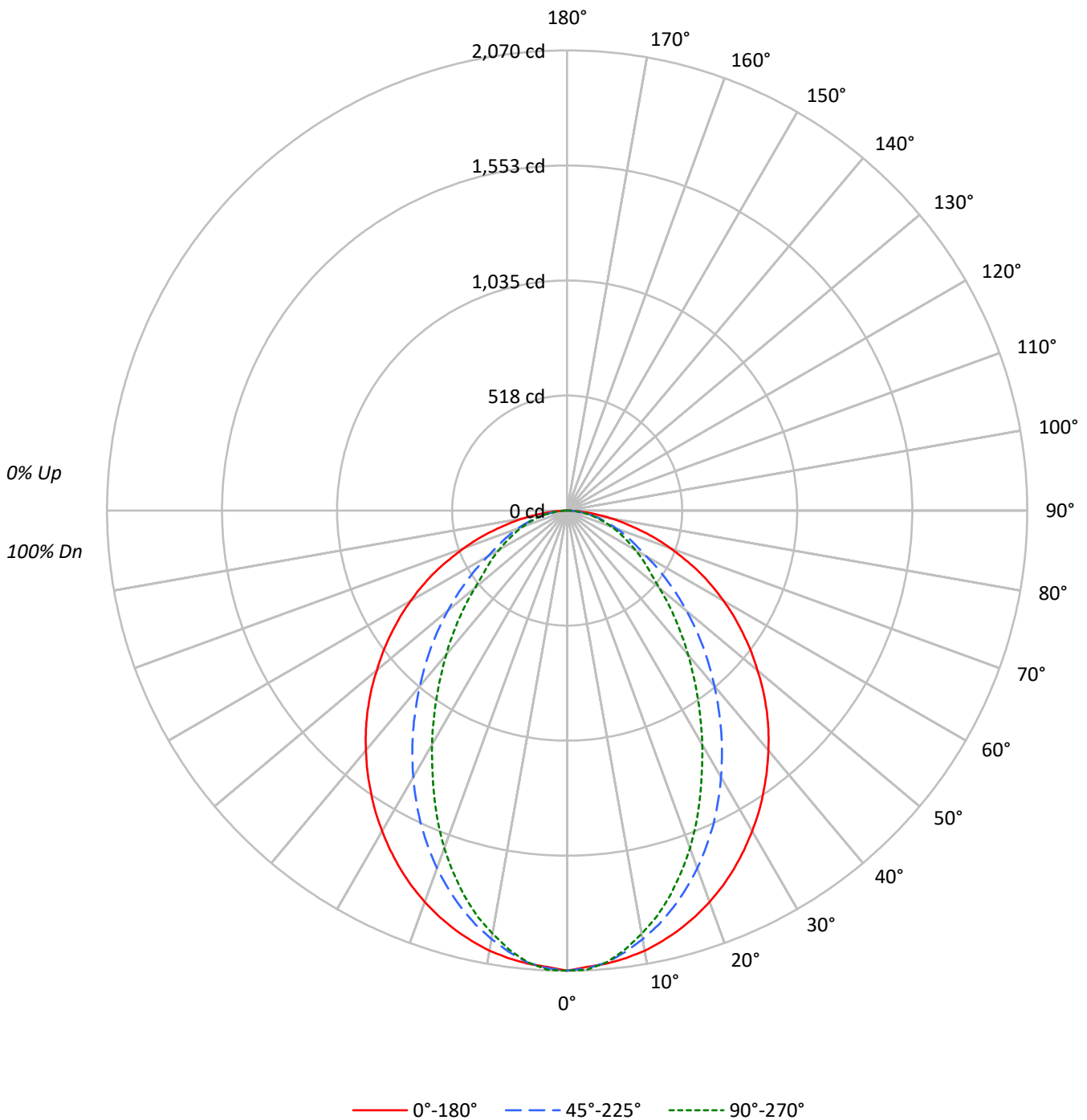
Lumens per Lamp: N/A
Luminaire Lumens: 4122.5 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	18300	18300	18300
5°	18153	18113	18099
10°	18049	17570	17351
15°	17858	16910	16394
20°	17625	16107	15204
25°	17339	15184	13818
30°	16995	14134	12408
35°	16636	13036	11047
40°	16260	11901	9773
45°	15863	10798	8589
50°	15376	9637	7417
55°	14907	8475	6738
60°	14381	7271	6247
65°	13732	6596	5831
70°	12757	6103	5511
75°	11550	5619	5203
80°	10081	5193	4888
85°	7730	4788	4484

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15863 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.7	4.7
10°-20°	522.7	12.7
20°-30°	723.8	17.6
30°-40°	776.8	18.8
40°-50°	706.5	17.1
50°-60°	556.3	13.5
60°-70°	380.8	9.2
70°-80°	205.0	5.0
80°-90°	58.0	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°	1439.2	34.9
0°-40°	2216.0	53.8
0°-60°	3478.8	84.4
0°-90°	4122.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4122.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2070	2070	2070	2070	2070	
5°	2045	2068	2041	2030	2039	194
15°	1951	1930	1847	1797	1791	550
25°	1777	1704	1556	1444	1416	818
35°	1541	1421	1208	1062	1024	964
45°	1269	1107	864	714	687	978
55°	967	783	550	443	437	865
65°	656	469	315	280	279	648
75°	338	206	164	151	152	361
85°	76	52	47	44	44	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2069.8	2069.8	2069.8	2069.8	2069.8
2.5°	2054.6	2078.9	2060.7	2063.7	2066.8
5°	2045.4	2068.3	2040.9	2030.2	2039.3
7.5°	2030.2	2045.4	2002.8	1983.0	1992.1
10°	2010.4	2013.5	1957.1	1928.2	1932.7
12.5°	1983.0	1975.4	1906.8	1865.7	1868.8
15°	1951.0	1929.7	1847.4	1797.2	1791.1
17.5°	1914.5	1879.4	1782.0	1718.0	1705.8
20°	1873.3	1826.1	1711.9	1629.6	1615.9
22.5°	1827.6	1766.7	1635.7	1538.3	1518.5
25°	1777.4	1704.3	1556.5	1443.8	1416.4
27.5°	1722.6	1637.3	1471.3	1347.9	1312.9
30°	1664.7	1567.2	1384.4	1251.9	1215.4
32.5°	1605.3	1495.6	1296.1	1156.0	1117.9
35°	1541.3	1421.0	1207.8	1061.6	1023.5
37.5°	1475.8	1343.3	1117.9	970.2	930.6
40°	1408.8	1265.6	1031.1	878.8	846.8
42.5°	1340.3	1186.4	945.8	793.5	764.6
45°	1268.7	1107.2	863.6	714.3	686.9
47.5°	1195.6	1026.5	779.8	639.7	613.8
50°	1117.9	945.8	700.6	566.6	539.2
52.5°	1043.3	863.6	624.4	495.0	481.3
55°	967.1	782.8	549.8	443.2	437.1
57.5°	891.0	702.1	481.3	402.1	396.0
60°	813.3	622.9	411.2	359.4	353.3
62.5°	735.6	545.2	359.4	318.3	315.3
65°	656.4	469.1	315.3	280.2	278.7
67.5°	572.7	396.0	275.7	246.7	245.2
70°	493.5	322.9	236.1	213.2	213.2
72.5°	418.8	255.9	199.5	181.2	181.2
75°	338.1	205.6	164.5	150.8	152.3
77.5°	266.5	161.4	132.5	123.4	123.4
80°	198.0	120.3	102.0	94.4	96.0
82.5°	134.0	83.8	73.1	68.5	68.5
85°	76.2	51.8	47.2	44.2	44.2
87.5°	27.4	24.4	22.8	19.8	21.3
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	21.24	22.77	21.61	23.08	23.39	17.02	18.54	17.38	18.86	19.17
	3H	23.02	24.39	23.39	24.71	25.08	18.63	20.00	19.01	20.33	20.69
	4H	23.69	24.97	24.09	25.32	25.70	19.26	20.55	19.66	20.90	21.27
	6H	24.20	25.39	24.61	25.75	26.14	19.76	20.95	20.17	21.32	21.71
	8H	24.36	25.49	24.79	25.88	26.28	19.93	21.06	20.36	21.45	21.85
	12H	24.46	25.54	24.89	25.93	26.36	20.05	21.14	20.48	21.52	21.95
4H	2H	21.34	22.62	21.74	22.97	23.35	17.74	19.02	18.14	19.37	19.75
	3H	23.28	24.35	23.69	24.75	25.15	19.54	20.61	19.96	21.01	21.42
	4H	24.04	25.00	24.47	25.42	25.85	20.28	21.25	20.71	21.66	22.10
	6H	24.67	25.51	25.13	25.95	26.41	20.90	21.74	21.36	22.18	22.64
	8H	24.89	25.68	25.35	26.12	26.59	21.11	21.90	21.58	22.34	22.81
	12H	25.05	25.75	25.53	26.23	26.70	21.28	21.98	21.76	22.46	22.93
8H	4H	24.09	24.88	24.56	25.32	25.79	20.67	21.46	21.13	21.90	22.37
	6H	24.79	25.44	25.29	25.93	26.41	21.40	22.05	21.90	22.54	23.02
	8H	25.06	25.64	25.57	26.15	26.64	21.69	22.27	22.20	22.78	23.27
	12H	25.28	25.79	25.79	26.29	26.85	21.94	22.45	22.44	22.94	23.51
12H	4H	24.09	24.79	24.57	25.27	25.74	20.73	21.43	21.21	21.91	22.38
	6H	24.79	25.37	25.30	25.88	26.37	21.48	22.07	22.00	22.58	23.07
	8H	25.09	25.61	25.60	26.10	26.67	21.83	22.35	22.34	22.84	23.40