

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: P1056039

Luminaire Tested: S124R3DR-S575D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056039
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-S575D835-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

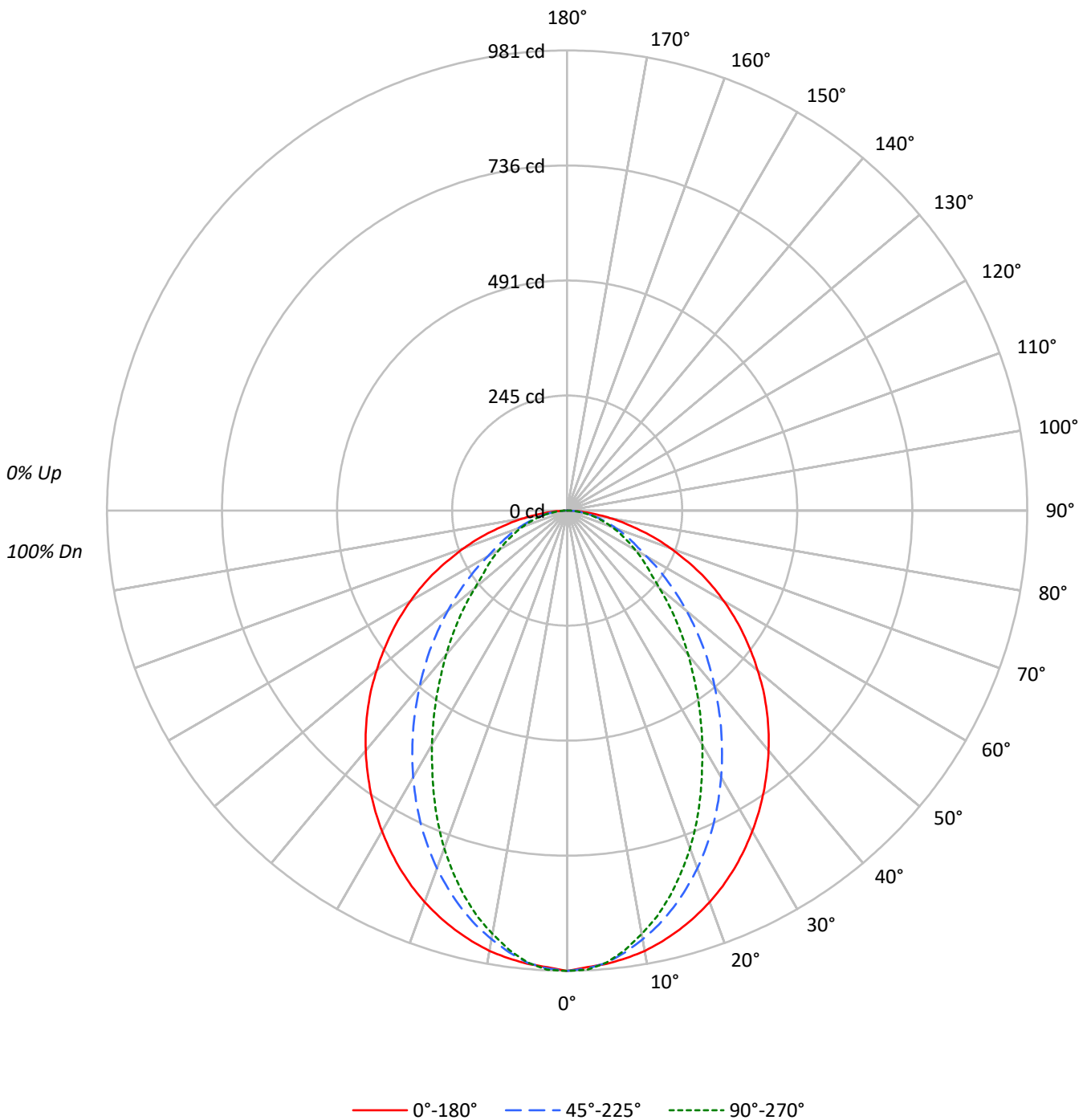
Lumens per Lamp: N/A
Luminaire Lumens: 1954.7 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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	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°	8677	8677	8677
5°	8607	8588	8582
10°	8558	8331	8227
15°	8468	8018	7773
20°	8357	7637	7209
25°	8221	7199	6552
30°	8058	6701	5884
35°	7888	6181	5238
40°	7710	5643	4634
45°	7521	5120	4072
50°	7291	4569	3516
55°	7069	4019	3195
60°	6818	3448	2962
65°	6510	3128	2766
70°	6049	2893	2613
75°	5476	2665	2466
80°	4781	2464	2317
85°	3662	2272	2120

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7521 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.4	4.7
10°-20°	247.8	12.7
20°-30°	343.2	17.6
30°-40°	368.3	18.8
40°-50°	335.0	17.1
50°-60°	263.8	13.5
60°-70°	180.5	9.2
70°-80°	97.2	5.0
80°-90°	27.5	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°	682.4	34.9
0°-40°	1050.7	53.8
0°-60°	1649.5	84.4
0°-90°	1954.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1954.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	970	981	968	963	967	92
15°	925	915	876	852	849	261
25°	843	808	738	685	672	388
35°	731	674	573	503	485	457
45°	602	525	410	339	326	464
55°	459	371	261	210	207	410
65°	311	222	150	133	132	307
75°	160	98	78	72	72	171
85°	36	25	22	21	21	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	981.4	981.4	981.4	981.4	981.4
2.5°	974.2	985.7	977.1	978.5	979.9
5°	969.8	980.7	967.7	962.6	967.0
7.5°	962.6	969.8	949.6	940.2	944.6
10°	953.2	954.7	928.0	914.2	916.4
12.5°	940.2	936.6	904.1	884.6	886.1
15°	925.1	915.0	876.0	852.1	849.2
17.5°	907.7	891.1	844.9	814.6	808.8
20°	888.2	865.9	811.7	772.7	766.2
22.5°	866.6	837.7	775.6	729.4	720.0
25°	842.7	808.1	738.0	684.6	671.6
27.5°	816.7	776.3	697.6	639.1	622.5
30°	789.3	743.1	656.4	593.6	576.3
32.5°	761.1	709.1	614.5	548.1	530.1
35°	730.8	673.8	572.7	503.3	485.3
37.5°	699.8	636.9	530.1	460.0	441.2
40°	668.0	600.1	488.9	416.7	401.5
42.5°	635.5	562.6	448.5	376.2	362.5
45°	601.5	525.0	409.5	338.7	325.7
47.5°	566.9	486.7	369.7	303.3	291.0
50°	530.1	448.5	332.2	268.6	255.6
52.5°	494.7	409.5	296.1	234.7	228.2
55°	458.6	371.2	260.7	210.1	207.3
57.5°	422.5	332.9	228.2	190.6	187.8
60°	385.6	295.4	195.0	170.4	167.5
62.5°	348.8	258.5	170.4	150.9	149.5
65°	311.2	222.4	149.5	132.9	132.2
67.5°	271.5	187.8	130.7	117.0	116.3
70°	234.0	153.1	111.9	101.1	101.1
72.5°	198.6	121.3	94.6	85.9	85.9
75°	160.3	97.5	78.0	71.5	72.2
77.5°	126.4	76.5	62.8	58.5	58.5
80°	93.9	57.0	48.4	44.8	45.5
82.5°	63.5	39.7	34.7	32.5	32.5
85°	36.1	24.6	22.4	20.9	20.9
87.5°	13.0	11.6	10.8	9.4	10.1
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	18.65	20.17	19.01	20.49	20.80	14.42	15.95	14.79	16.26	16.58
	3H	20.42	21.79	20.80	22.12	22.48	16.04	17.41	16.41	17.73	18.10
	4H	21.10	22.38	21.49	22.73	23.11	16.67	17.95	17.07	18.30	18.68
	6H	21.60	22.79	22.02	23.16	23.55	17.17	18.36	17.58	18.72	19.11
	8H	21.77	22.90	22.19	23.29	23.69	17.34	18.47	17.76	18.86	19.26
	12H	21.87	22.95	22.30	23.33	23.76	17.46	18.54	17.89	18.93	19.36
4H	2H	18.74	20.03	19.14	20.38	20.76	15.14	16.43	15.54	16.78	17.16
	3H	20.69	21.76	21.10	22.16	22.56	16.95	18.02	17.36	18.42	18.82
	4H	21.44	22.41	21.88	22.82	23.26	17.69	18.65	18.12	19.07	19.51
	6H	22.08	22.92	22.54	23.36	23.82	18.31	19.14	18.76	19.59	20.05
	8H	22.30	23.08	22.76	23.53	23.99	18.52	19.31	18.98	19.75	20.22
	12H	22.45	23.15	22.93	23.63	24.10	18.69	19.39	19.17	19.87	20.34
8H	4H	21.50	22.29	21.96	22.73	23.20	18.08	18.86	18.54	19.31	19.77
	6H	22.20	22.85	22.70	23.34	23.82	18.81	19.46	19.31	19.95	20.43
	8H	22.47	23.05	22.98	23.56	24.05	19.10	19.68	19.61	20.19	20.68
	12H	22.69	23.20	23.20	23.69	24.26	19.34	19.86	19.85	20.35	20.91
12H	4H	21.49	22.19	21.97	22.67	23.14	18.13	18.83	18.61	19.31	19.78
	6H	22.19	22.78	22.71	23.29	23.77	18.89	19.48	19.41	19.98	20.47
	8H	22.50	23.02	23.01	23.51	24.07	19.24	19.76	19.75	20.25	20.81