

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059109

Luminaire Tested: S123RDR-S1165D840-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059109
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-S1165D840-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

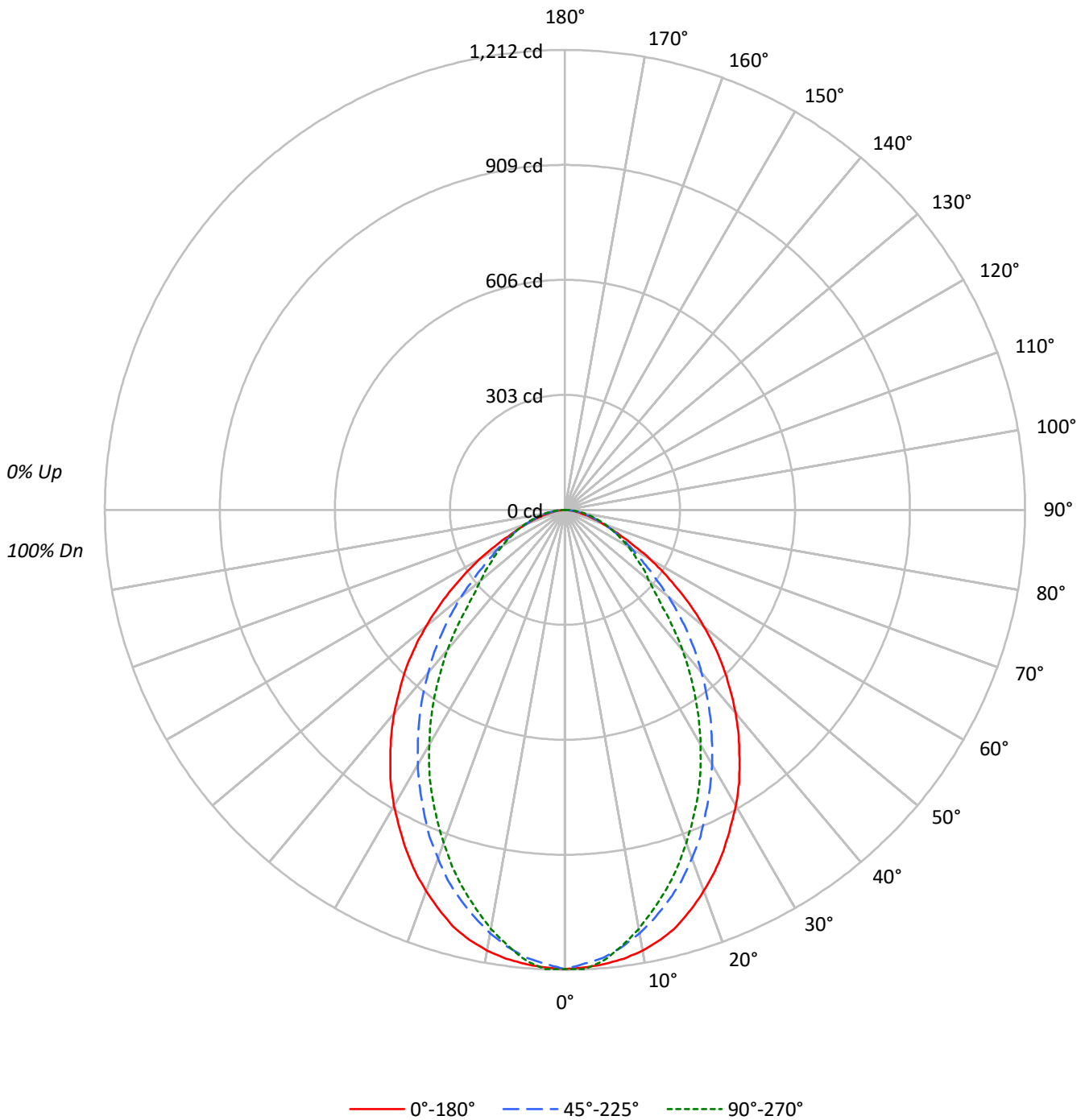
Lumens per Lamp: N/A
Luminaire Lumens: 2116.7 lumens
Efficiency: N/A
Efficacy: 50.6 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 41.8
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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35				
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14211	14211	14211
5°	14162	13956	14042
10°	14066	13511	13372
15°	13828	12926	12572
20°	13360	12215	11669
25°	12815	11383	10742
30°	12209	10512	9684
35°	11489	9571	8569
40°	10725	8584	7381
45°	9831	7584	6063
50°	8716	6511	5261
55°	7415	5450	4823
60°	6047	4749	4476
65°	4607	4204	4162
70°	3595	3746	3897
75°	2904	3366	3630
80°	2164	2752	3347
85°	1172	1765	2937

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9831 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.3	5.3
10°-20°	302.2	14.3
20°-30°	410.9	19.4
30°-40°	425.9	20.1
40°-50°	359.2	17.0
50°-60°	255.0	12.0
60°-70°	155.9	7.4
70°-80°	77.5	3.7
80°-90°	17.6	0.8
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°	825.5	39.0
0°-40°	1251.4	59.1
0°-60°	1865.7	88.1
0°-90°	2116.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2116.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1210	1210	1210	1210	1210	
5°	1202	1202	1184	1191	1191	114
15°	1138	1116	1063	1044	1034	319
25°	989	946	879	847	829	455
35°	802	740	668	621	598	501
45°	592	530	457	394	365	455
55°	362	324	266	243	236	325
65°	166	160	151	151	150	169
75°	64	68	74	77	80	69
85°	9	10	13	19	22	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1210.2	1210.2	1210.2	1210.2	1210.2
2.5°	1207.3	1208.8	1197.1	1210.2	1211.7
5°	1201.5	1201.5	1184.0	1191.3	1191.3
7.5°	1192.8	1189.9	1160.8	1160.8	1157.9
10°	1179.7	1170.9	1133.1	1125.9	1121.5
12.5°	1160.8	1146.2	1099.7	1086.6	1077.9
15°	1137.5	1115.7	1063.3	1044.4	1034.2
17.5°	1104.0	1082.2	1024.0	997.8	986.2
20°	1069.1	1037.1	977.5	951.3	933.8
22.5°	1031.3	990.6	932.4	900.4	881.5
25°	989.1	945.5	878.6	846.6	829.1
27.5°	944.0	896.0	827.7	791.3	773.8
30°	900.4	845.1	775.3	734.6	714.2
32.5°	853.8	791.3	720.0	677.8	657.5
35°	801.5	740.4	667.7	621.1	597.8
37.5°	752.0	689.5	613.8	564.4	538.2
40°	699.7	637.1	560.0	509.1	481.5
42.5°	644.4	584.7	509.1	449.5	423.3
45°	592.0	529.5	456.7	394.2	365.1
47.5°	535.3	477.1	405.8	341.8	321.5
50°	477.1	423.3	356.4	298.2	288.0
52.5°	420.4	375.3	306.9	269.1	264.7
55°	362.2	324.4	266.2	242.9	235.6
57.5°	308.4	280.7	228.4	216.7	213.8
60°	257.5	234.2	202.2	194.9	190.6
62.5°	208.0	194.9	176.0	173.1	170.2
65°	165.8	160.0	151.3	151.3	149.8
67.5°	130.9	130.9	129.5	132.4	130.9
70°	104.7	106.2	109.1	112.0	113.5
72.5°	82.9	87.3	90.2	94.5	96.0
75°	64.0	68.4	74.2	77.1	80.0
77.5°	46.5	50.9	56.7	61.1	64.0
80°	32.0	34.9	40.7	46.5	49.5
82.5°	20.4	21.8	26.2	32.0	34.9
85°	8.7	10.2	13.1	18.9	21.8
87.5°	0.0	0.0	1.5	5.8	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)