

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: P243214

Luminaire Tested: S122RDRP-H485D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243214
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-H485D927-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

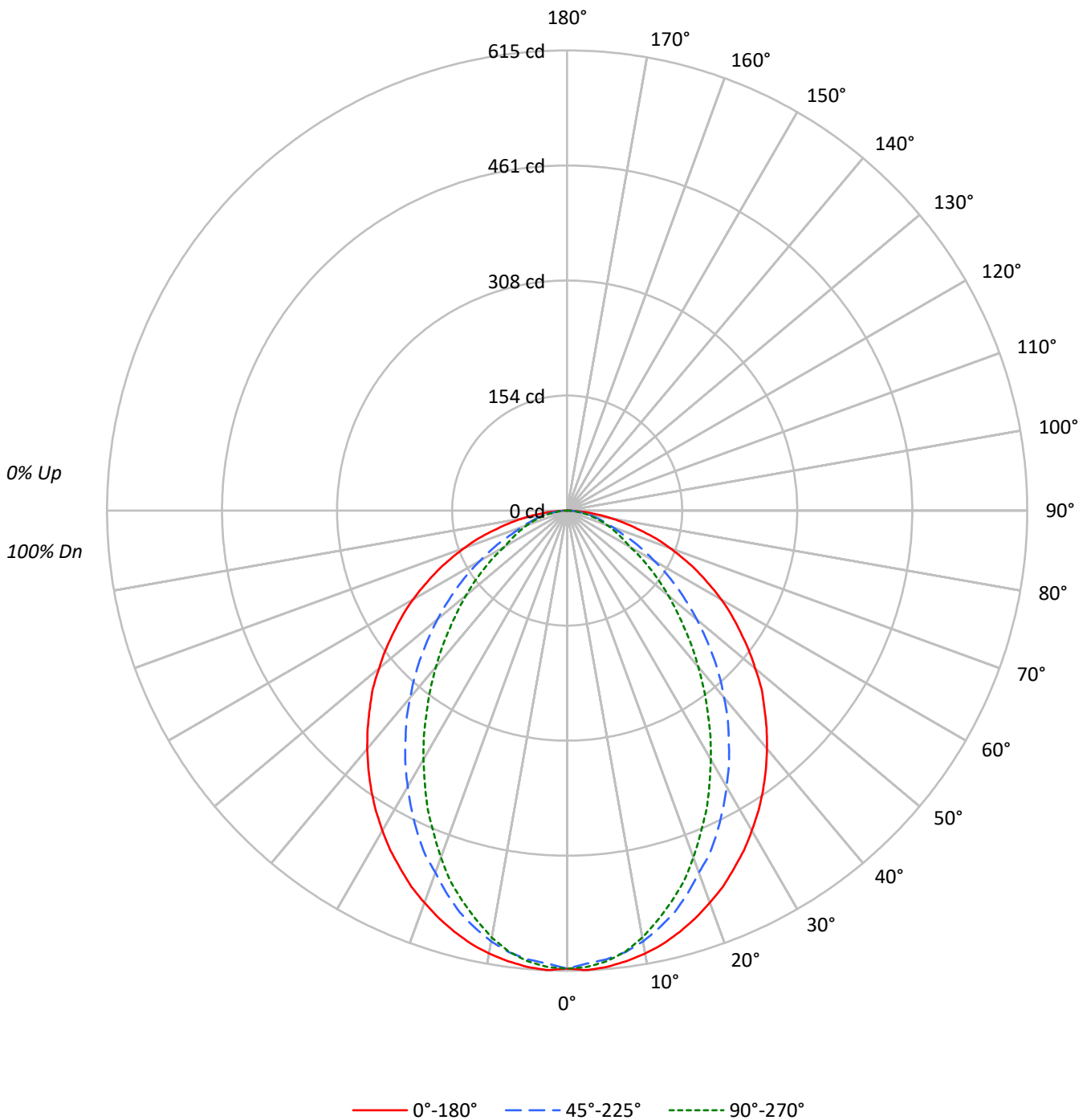
Lumens per Lamp: N/A
Luminaire Lumens: 1255.3 lumens
Efficiency: N/A
Efficacy: 73.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	74	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	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	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°	11659	11659	11659
5°	11704	11512	11562
10°	11624	11307	11206
15°	11487	10956	10655
20°	11305	10437	9999
25°	11088	9968	9258
30°	10861	9374	8446
35°	10610	8757	7601
40°	10334	8116	6776
45°	10045	7440	5961
50°	9720	6697	5227
55°	9385	5964	4506
60°	9074	5131	3680
65°	8663	4331	3403
70°	8148	3587	3174
75°	7426	3268	2914
80°	6658	2896	2611
85°	5551	2426	2317

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10045 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.3	4.6
10°-20°	157.1	12.5
20°-30°	220.4	17.6
30°-40°	240.1	19.1
40°-50°	220.7	17.6
50°-60°	173.2	13.8
60°-70°	113.0	9.0
70°-80°	58.4	4.7
80°-90°	15.1	1.2
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°	434.9	34.6
0°-40°	675.0	53.8
0°-60°	1068.8	85.1
0°-90°	1255.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1255.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	612	612	612	612	612	
5°	612	609	602	606	605	58
15°	582	576	556	544	540	164
25°	528	509	474	451	440	243
35°	456	426	377	342	327	285
45°	373	335	276	236	221	288
55°	283	240	180	146	136	253
65°	192	146	96	78	76	190
75°	101	63	44	41	40	108
85°	25	12	11	11	11	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	612.1	612.1	612.1	612.1	612.1
2.5°	614.7	612.1	605.8	611.6	610.5
5°	612.1	608.9	602.1	606.3	604.7
7.5°	607.4	604.2	595.2	597.3	594.7
10°	601.0	596.8	584.6	582.5	579.4
12.5°	593.1	587.3	570.9	564.6	560.3
15°	582.5	575.7	555.6	544.5	540.3
17.5°	570.9	560.9	536.1	523.4	519.2
20°	557.7	546.1	514.9	501.7	493.3
22.5°	544.0	529.2	497.0	476.4	466.3
25°	527.6	509.1	474.3	451.0	440.5
27.5°	511.8	490.1	450.5	423.6	411.9
30°	493.8	470.0	426.2	395.0	384.0
32.5°	475.8	448.4	402.4	368.6	356.0
35°	456.3	426.2	376.6	341.7	326.9
37.5°	436.2	405.1	352.8	314.2	300.0
40°	415.6	380.8	326.4	286.2	272.5
42.5°	394.5	359.1	301.6	260.4	247.2
45°	372.9	334.8	276.2	236.1	221.3
47.5°	352.3	311.1	250.3	212.3	198.0
50°	328.0	287.3	226.0	187.5	176.4
52.5°	305.8	263.5	202.3	165.3	155.8
55°	282.6	240.3	179.6	145.8	135.7
57.5°	260.9	216.0	156.9	126.2	116.7
60°	238.2	192.8	134.7	106.7	96.6
62.5°	214.4	169.0	115.1	88.7	85.6
65°	192.2	145.8	96.1	78.2	75.5
67.5°	168.5	124.1	76.6	68.7	66.0
70°	146.3	103.0	64.4	58.6	57.0
72.5°	124.6	82.9	54.4	49.6	48.1
75°	100.9	62.8	44.4	40.7	39.6
77.5°	80.3	44.4	35.4	32.7	31.7
80°	60.7	32.2	26.4	24.8	23.8
82.5°	41.7	21.7	18.5	17.4	16.9
85°	25.4	12.1	11.1	10.6	10.6
87.5°	10.0	4.8	4.8	4.2	4.2
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	19.78	21.30	20.14	21.62	21.93	15.66	17.19	16.03	17.50	17.81
	3H	21.55	22.91	21.92	23.24	23.60	16.96	18.32	17.34	18.65	19.01
	4H	22.21	23.49	22.61	23.84	24.22	17.47	18.75	17.87	19.10	19.47
	6H	22.70	23.88	23.11	24.25	24.64	17.85	19.03	18.26	19.40	19.79
	8H	22.86	23.99	23.29	24.38	24.78	17.97	19.10	18.40	19.49	19.89
	12H	22.97	24.05	23.40	24.43	24.86	18.05	19.13	18.48	19.51	19.94
4H	2H	19.88	21.16	20.28	21.51	21.89	16.37	17.65	16.77	18.00	18.38
	3H	21.82	22.88	22.23	23.28	23.68	17.84	18.91	18.25	19.31	19.71
	4H	22.56	23.52	23.00	23.94	24.37	18.45	19.41	18.88	19.82	20.26
	6H	23.15	23.99	23.61	24.43	24.89	18.94	19.77	19.40	20.22	20.68
	8H	23.37	24.15	23.83	24.59	25.06	19.10	19.88	19.57	20.32	20.79
	12H	23.53	24.23	24.01	24.70	25.18	19.22	19.92	19.70	20.39	20.87
8H	4H	22.59	23.37	23.05	23.81	24.28	18.81	19.59	19.27	20.03	20.50
	6H	23.23	23.87	23.72	24.36	24.84	19.40	20.05	19.90	20.54	21.02
	8H	23.47	24.05	23.99	24.56	25.05	19.63	20.20	20.14	20.71	21.20
	12H	23.69	24.20	24.20	24.69	25.26	19.81	20.32	20.32	20.81	21.37
12H	4H	22.57	23.27	23.05	23.75	24.22	18.85	19.55	19.34	20.03	20.50
	6H	23.21	23.78	23.72	24.29	24.78	19.47	20.05	19.98	20.56	21.04
	8H	23.49	24.00	24.00	24.49	25.06	19.74	20.25	20.25	20.75	21.31