

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: P242368

Luminaire Tested: S122RDRP-S485D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242368
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S485D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

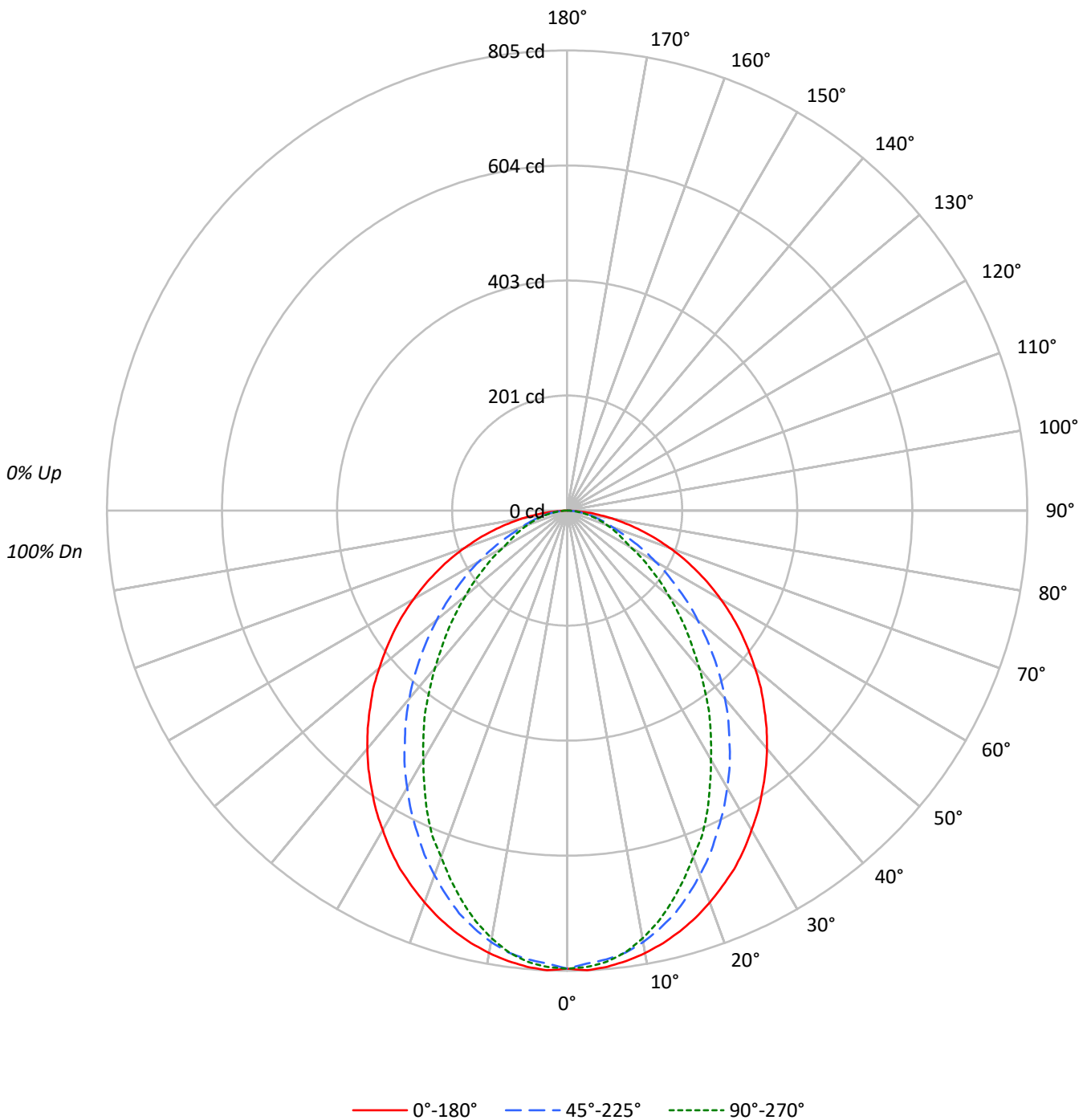
Lumens per Lamp: N/A
Luminaire Lumens: 1647.9 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
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

TEST NUMBER: P242368

CATALOG NUMBER: S122RDRP-S485D840-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P242368

CATALOG NUMBER: S122RDRP-S485D840-X4F0-XX-UDD-F-W

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	78	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°	15261	15261	15261
5°	15319	15071	15153
10°	15202	14823	14698
15°	15028	14385	13969
20°	14787	13757	13066
25°	14539	13045	12192
30°	14193	12312	11068
35°	13859	11515	10082
40°	13522	10692	8944
45°	13127	9768	7912
50°	12721	8831	6899
55°	12304	7827	5924
60°	11821	6770	4918
65°	11277	5688	4476
70°	10620	4684	4121
75°	9818	4268	3842
80°	8666	3817	3499
85°	6819	3016	3016

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13127 cd/sqm



TEST NUMBER: P242368

CATALOG NUMBER: S122RDRP-S485D840-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.1	4.6
10°-20°	206.2	12.5
20°-30°	289.4	17.6
30°-40°	315.5	19.1
40°-50°	290.0	17.6
50°-60°	227.7	13.8
60°-70°	148.2	9.0
70°-80°	76.3	4.6
80°-90°	19.5	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°	570.7	34.6
0°-40°	886.2	53.8
0°-60°	1403.9	85.2
0°-90°	1647.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1647.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	801	801	801	801	801	
5°	801	798	788	795	792	76
15°	762	754	730	716	708	215
25°	692	668	621	591	580	318
35°	596	559	495	450	434	373
45°	487	439	363	311	294	376
55°	370	314	236	192	178	331
65°	250	191	126	102	99	248
75°	133	83	58	53	52	141
85°	31	16	14	14	14	37
90°	0	0	0	0	0	



TEST NUMBER: P242368

CATALOG NUMBER: S122RDRP-S485D840-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	801.2	801.2	801.2	801.2	801.2
2.5°	804.9	801.2	793.3	800.5	799.1
5°	801.2	797.6	788.2	794.7	792.5
7.5°	794.7	790.4	780.2	783.1	779.5
10°	786.0	780.9	766.4	764.3	759.9
12.5°	775.1	768.6	749.0	744.7	736.7
15°	762.1	754.1	729.5	715.7	708.4
17.5°	746.9	735.3	704.8	688.9	677.3
20°	729.5	715.0	678.7	660.6	644.6
22.5°	710.6	693.9	651.9	627.2	616.3
25°	691.8	668.5	620.7	591.0	580.1
27.5°	669.3	644.6	591.7	557.6	540.9
30°	645.3	617.8	559.8	522.8	503.2
32.5°	622.1	588.8	529.3	485.8	467.7
35°	596.0	559.1	495.2	449.6	433.6
37.5°	570.7	530.8	463.3	413.3	395.2
40°	543.8	500.3	430.0	378.5	359.7
42.5°	516.3	469.9	396.6	343.0	324.8
45°	487.3	438.7	362.6	311.1	293.7
47.5°	459.7	408.2	329.9	278.4	262.5
50°	429.3	377.8	298.0	248.0	232.8
52.5°	399.5	345.2	267.6	219.7	205.9
55°	370.5	314.0	235.7	192.2	178.4
57.5°	340.8	282.8	207.4	166.8	155.2
60°	310.3	252.3	177.7	140.7	129.1
62.5°	280.6	222.6	152.3	117.5	111.7
65°	250.2	191.4	126.2	101.5	99.3
67.5°	221.2	162.4	101.5	89.2	87.0
70°	190.7	134.1	84.1	76.9	74.0
72.5°	161.7	108.0	70.3	64.5	63.1
75°	133.4	82.7	58.0	52.9	52.2
77.5°	105.1	58.7	45.7	42.8	41.3
80°	79.0	42.1	34.8	31.9	31.9
82.5°	55.1	28.3	23.9	22.5	22.5
85°	31.2	16.0	13.8	13.8	13.8
87.5°	11.6	5.8	5.8	5.1	5.1
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242368
 CATALOG NUMBER: S122RDRP-S485D840-X4F0-XX-UDD-F-W

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	20.70	22.23	21.07	22.54	22.85	16.66	18.19	17.03	18.50	18.81
	3H	22.47	23.83	22.85	24.16	24.52	17.93	19.30	18.31	19.62	19.99
	4H	23.14	24.42	23.53	24.76	25.14	18.43	19.71	18.83	20.06	20.44
	6H	23.62	24.81	24.04	25.17	25.57	18.81	20.00	19.22	20.36	20.75
	8H	23.79	24.92	24.22	25.31	25.71	18.94	20.06	19.36	20.45	20.85
	12H	23.89	24.97	24.32	25.35	25.78	19.02	20.10	19.45	20.48	20.91
4H	2H	20.81	22.09	21.21	22.44	22.82	17.36	18.64	17.76	18.99	19.37
	3H	22.74	23.80	23.15	24.20	24.60	18.80	19.87	19.21	20.27	20.67
	4H	23.49	24.45	23.92	24.86	25.30	19.40	20.36	19.84	20.77	21.21
	6H	24.08	24.91	24.54	25.36	25.82	19.89	20.72	20.35	21.17	21.62
	8H	24.30	25.07	24.76	25.52	25.99	20.05	20.83	20.52	21.27	21.74
	12H	24.45	25.14	24.93	25.62	26.09	20.17	20.87	20.65	21.34	21.81
8H	4H	23.51	24.29	23.98	24.74	25.20	19.76	20.53	20.22	20.98	21.45
	6H	24.15	24.79	24.65	25.29	25.76	20.34	20.99	20.84	21.48	21.95
	8H	24.40	24.98	24.92	25.49	25.98	20.56	21.14	21.08	21.65	22.14
	12H	24.61	25.12	25.12	25.61	26.17	20.74	21.25	21.25	21.75	22.31
12H	4H	23.50	24.19	23.98	24.67	25.14	19.80	20.49	20.28	20.97	21.44
	6H	24.13	24.71	24.65	25.22	25.71	20.41	20.98	20.92	21.49	21.98
	8H	24.42	24.93	24.93	25.42	25.98	20.68	21.19	21.19	21.68	22.25