

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: P242364

Luminaire Tested: S122RDRP-S485D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242364
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-S485D835-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

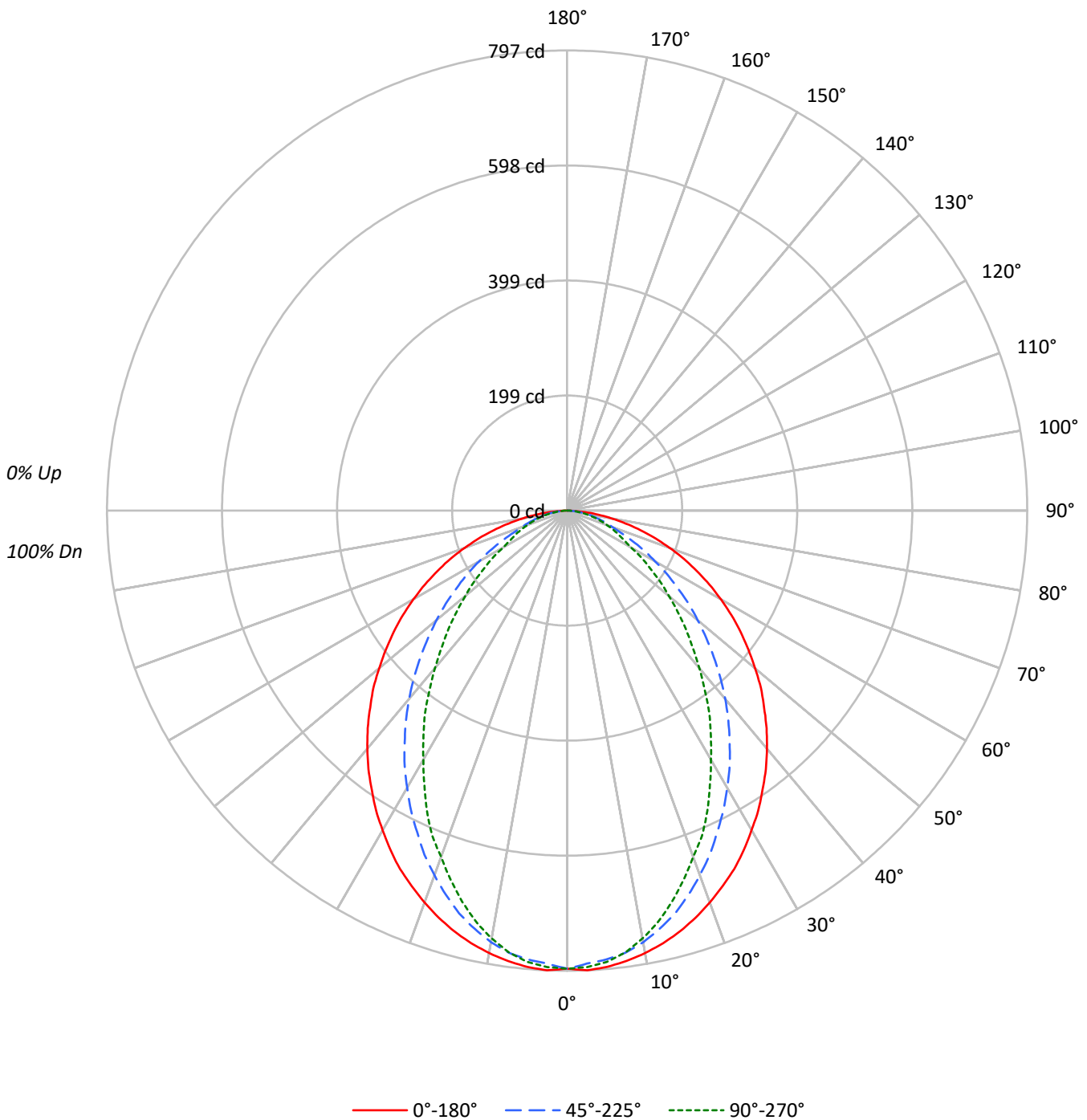
Lumens per Lamp: N/A
Luminaire Lumens: 1631.7 lumens
Efficiency: N/A
Efficacy: 86.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

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

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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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74				74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64				64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55				55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49				49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43				43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39				39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35				35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32				32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29				29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15112	15112	15112
5°	15170	14924	15006
10°	15054	14680	14555
15°	14880	14243	13833
20°	14641	13624	12938
25°	14397	12917	12072
30°	14054	12191	10960
35°	13724	11403	9985
40°	13390	10588	8854
45°	12997	9671	7833
50°	12597	8745	6830
55°	12184	7751	5865
60°	11707	6701	4869
65°	11164	5629	4435
70°	10515	4639	4077
75°	9722	4224	3805
80°	8589	3784	3466
85°	6753	2972	2972

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12997 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.4	4.6
10°-20°	204.1	12.5
20°-30°	286.6	17.6
30°-40°	312.4	19.1
40°-50°	287.1	17.6
50°-60°	225.5	13.8
60°-70°	146.8	9.0
70°-80°	75.6	4.6
80°-90°	19.3	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°	565.1	34.6
0°-40°	877.5	53.8
0°-60°	1390.1	85.2
0°-90°	1631.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1631.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	793	793	793	793	793	
5°	793	790	780	787	785	75
15°	755	747	722	709	702	213
25°	685	662	615	585	574	315
35°	590	554	490	445	429	369
45°	482	434	359	308	291	373
55°	367	311	233	190	177	328
65°	248	190	125	100	98	246
75°	132	82	57	52	52	140
85°	31	16	14	14	14	37
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	793.4	793.4	793.4	793.4	793.4
2.5°	797.0	793.4	785.5	792.7	791.3
5°	793.4	789.8	780.5	787.0	784.8
7.5°	787.0	782.6	772.6	775.5	771.9
10°	778.3	773.3	759.0	756.8	752.5
12.5°	767.6	761.1	741.7	737.4	729.5
15°	754.6	746.7	722.3	708.7	701.5
17.5°	739.6	728.1	697.9	682.1	670.6
20°	722.3	708.0	672.1	654.1	638.3
22.5°	703.7	687.1	645.5	621.1	610.3
25°	685.0	662.0	614.6	585.2	574.4
27.5°	662.7	638.3	585.9	552.2	535.6
30°	639.0	611.8	554.3	517.7	498.3
32.5°	616.1	583.0	524.2	481.1	463.1
35°	590.2	553.6	490.4	445.2	429.4
37.5°	565.1	525.6	458.8	409.3	391.3
40°	538.5	495.4	425.8	374.8	356.1
42.5°	511.2	465.3	392.8	339.6	321.7
45°	482.5	434.4	359.0	308.0	290.8
47.5°	455.2	404.2	326.7	275.7	259.9
50°	425.1	374.1	295.1	245.6	230.5
52.5°	395.6	341.8	265.0	217.6	203.9
55°	366.9	310.9	233.4	190.3	176.6
57.5°	337.5	280.0	205.4	165.1	153.7
60°	307.3	249.9	175.9	139.3	127.8
62.5°	277.9	220.4	150.8	116.3	110.6
65°	247.7	189.6	124.9	100.5	98.4
67.5°	219.0	160.8	100.5	88.3	86.2
70°	188.8	132.8	83.3	76.1	73.2
72.5°	160.1	107.0	69.6	63.9	62.5
75°	132.1	81.9	57.4	52.4	51.7
77.5°	104.1	58.2	45.2	42.4	40.9
80°	78.3	41.6	34.5	31.6	31.6
82.5°	54.6	28.0	23.7	22.3	22.3
85°	30.9	15.8	13.6	13.6	13.6
87.5°	11.5	5.7	5.7	5.0	5.0
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	20.67	22.19	21.03	22.50	22.82	16.63	18.15	16.99	18.46	18.78
	3H	22.43	23.80	22.81	24.13	24.49	17.89	19.26	18.27	19.59	19.95
	4H	23.10	24.38	23.50	24.73	25.11	18.40	19.68	18.80	20.03	20.40
	6H	23.59	24.77	24.00	25.14	25.53	18.78	19.96	19.19	20.33	20.72
	8H	23.76	24.88	24.18	25.27	25.67	18.90	20.03	19.33	20.42	20.82
	12H	23.86	24.94	24.29	25.32	25.75	18.98	20.06	19.41	20.44	20.87
4H	2H	20.77	22.05	21.17	22.40	22.78	17.32	18.60	17.72	18.95	19.33
	3H	22.71	23.77	23.12	24.17	24.57	18.77	19.83	19.18	20.23	20.63
	4H	23.46	24.41	23.89	24.83	25.27	19.37	20.32	19.80	20.74	21.18
	6H	24.05	24.88	24.51	25.32	25.78	19.86	20.69	20.31	21.13	21.59
	8H	24.26	25.04	24.73	25.48	25.95	20.02	20.80	20.48	21.24	21.71
	12H	24.42	25.11	24.90	25.59	26.06	20.14	20.83	20.62	21.31	21.78
8H	4H	23.48	24.26	23.94	24.70	25.17	19.72	20.50	20.18	20.94	21.41
	6H	24.12	24.76	24.61	25.25	25.73	20.31	20.95	20.80	21.44	21.92
	8H	24.37	24.94	24.88	25.45	25.94	20.53	21.11	21.04	21.62	22.10
	12H	24.57	25.08	25.08	25.57	26.14	20.71	21.22	21.22	21.71	22.28
12H	4H	23.46	24.16	23.95	24.64	25.11	19.76	20.46	20.25	20.94	21.41
	6H	24.10	24.68	24.61	25.19	25.67	20.37	20.95	20.89	21.46	21.95
	8H	24.38	24.89	24.89	25.39	25.95	20.65	21.16	21.16	21.65	22.21