

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: P242707

Luminaire Tested: S124RDRP-S350D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242707
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S350D835-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

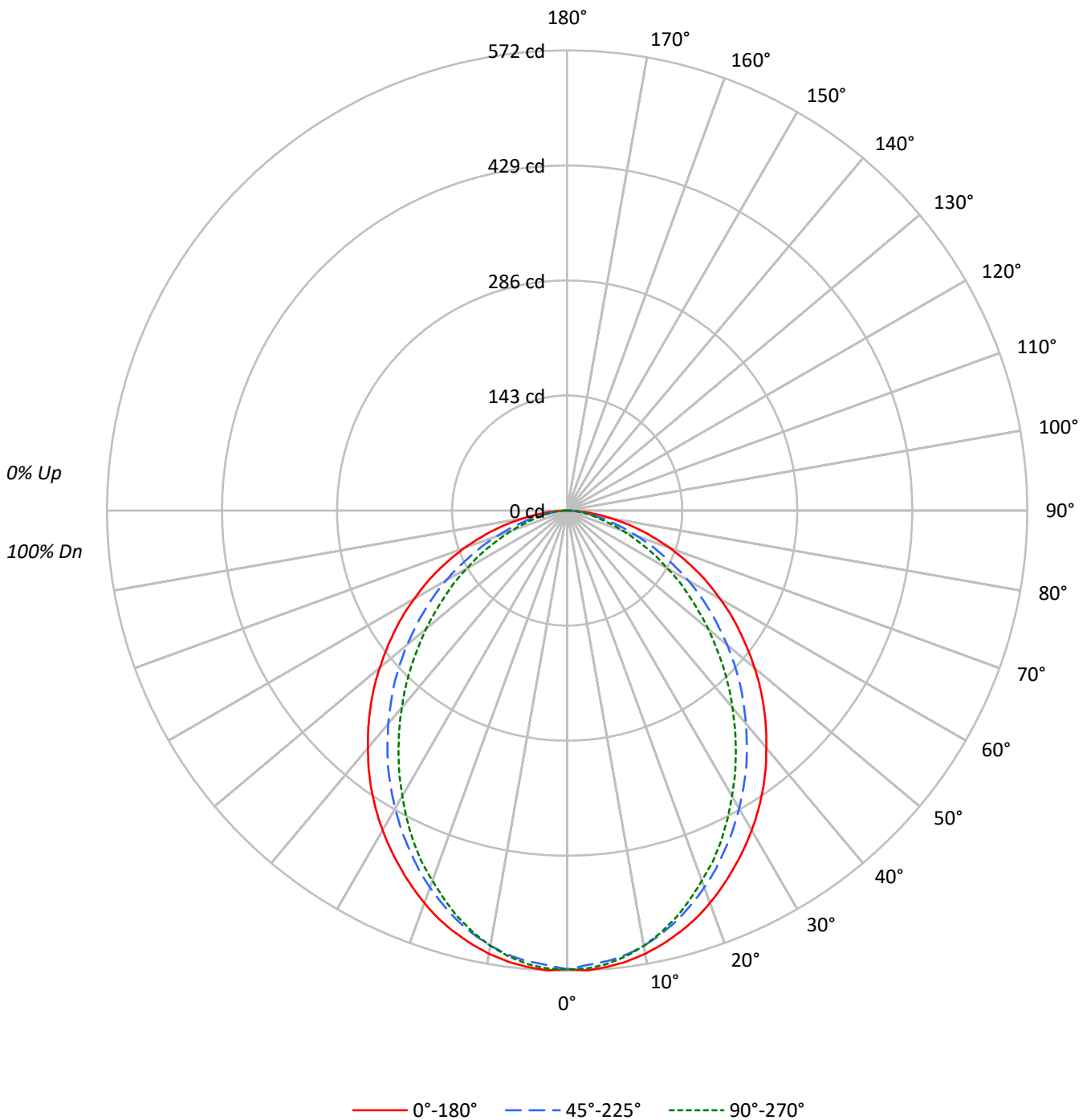
Lumens per Lamp: N/A
Luminaire Lumens: 1317.6 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5068	5068	5068
5°	5081	5018	5049
10°	5048	4958	4958
15°	4991	4853	4817
20°	4910	4716	4630
25°	4809	4557	4441
30°	4710	4388	4204
35°	4601	4212	3966
40°	4469	4013	3709
45°	4347	3815	3447
50°	4208	3587	3170
55°	4060	3349	2869
60°	3897	3090	2562
65°	3746	2764	2259
70°	3529	2407	1918
75°	3252	1995	1559
80°	2841	1520	1428
85°	2407	1377	1295

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4347 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.6	4.1
10°-20°	149.5	11.3
20°-30°	215.8	16.4
30°-40°	244.6	18.6
40°-50°	236.2	17.9
50°-60°	196.4	14.9
60°-70°	135.5	10.3
70°-80°	68.5	5.2
80°-90°	17.4	1.3
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°	419.0	31.8
0°-40°	663.6	50.4
0°-60°	1096.2	83.2
0°-90°	1317.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1317.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	570	570	570	570	570	
5°	569	568	562	567	566	54
15°	542	538	527	527	524	153
25°	490	482	465	457	453	226
35°	424	410	388	373	366	265
45°	346	330	304	282	274	267
55°	262	244	216	193	185	234
65°	178	159	131	113	107	176
75°	95	79	58	48	45	100
85°	24	15	14	13	13	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	570.2	570.2	570.2	570.2	570.2
2.5°	572.0	570.2	565.4	570.2	569.8
5°	569.4	567.6	562.4	566.7	565.9
7.5°	565.4	563.7	557.1	560.2	558.9
10°	559.3	557.1	549.3	551.0	549.3
12.5°	551.5	548.8	539.2	540.1	537.5
15°	542.3	538.4	527.4	526.6	523.5
17.5°	531.8	526.1	513.5	511.3	506.9
20°	519.1	513.5	498.6	495.1	489.5
22.5°	505.2	498.6	482.5	476.8	472.4
25°	490.3	482.5	464.6	457.1	452.8
27.5°	475.0	465.4	446.7	437.9	431.8
30°	458.9	448.0	427.5	416.5	409.6
32.5°	441.9	429.2	407.8	394.7	388.2
35°	424.0	410.0	388.2	373.3	365.5
37.5°	405.2	390.8	366.8	350.6	342.7
40°	385.1	370.7	345.8	327.5	319.6
42.5°	365.9	350.6	324.4	305.6	297.3
45°	345.8	329.7	303.5	282.1	274.2
47.5°	325.3	308.7	281.6	259.4	250.6
50°	304.3	287.3	259.4	237.5	229.2
52.5°	282.9	266.3	237.5	215.3	206.5
55°	262.0	244.5	216.1	193.4	185.1
57.5°	241.5	223.1	195.2	172.0	165.9
60°	219.2	201.7	173.8	151.1	144.1
62.5°	199.1	180.8	151.9	131.4	126.2
65°	178.1	159.4	131.4	112.6	107.4
67.5°	156.3	138.4	112.2	95.6	89.5
70°	135.8	117.5	92.6	78.2	73.8
72.5°	114.0	97.8	74.7	62.9	58.9
75°	94.7	78.6	58.1	48.0	45.4
77.5°	74.7	60.7	43.2	36.2	35.4
80°	55.5	42.8	29.7	28.4	27.9
82.5°	38.9	27.5	21.4	20.5	20.1
85°	23.6	14.8	13.5	12.7	12.7
87.5°	10.0	6.5	6.1	5.7	6.1
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	16.98	18.55	17.35	18.86	19.18	15.01	16.58	15.38	16.89	17.21
	3H	18.75	20.16	19.13	20.49	20.85	16.27	17.67	16.64	18.00	18.36
	4H	19.41	20.74	19.81	21.08	21.46	16.64	17.97	17.04	18.31	18.69
	6H	19.89	21.11	20.30	21.48	21.87	16.90	18.13	17.32	18.49	18.88
	8H	20.04	21.21	20.46	21.60	22.00	17.00	18.16	17.42	18.55	18.95
	12H	20.14	21.25	20.57	21.64	22.07	17.06	18.18	17.49	18.56	18.99
4H	2H	17.32	18.64	17.72	18.99	19.37	15.71	17.03	16.11	17.38	17.76
	3H	19.29	20.39	19.70	20.79	21.19	17.14	18.24	17.55	18.64	19.04
	4H	20.07	21.06	20.50	21.47	21.91	17.59	18.59	18.03	19.00	19.44
	6H	20.66	21.53	21.12	21.97	22.43	17.94	18.81	18.40	19.25	19.71
	8H	20.86	21.67	21.32	22.11	22.58	18.07	18.88	18.53	19.32	19.79
	12H	21.00	21.72	21.48	22.20	22.67	18.17	18.89	18.65	19.37	19.84
8H	4H	20.16	20.97	20.62	21.41	21.88	17.91	18.72	18.37	19.16	19.63
	6H	20.83	21.50	21.33	21.99	22.47	18.34	19.01	18.84	19.50	19.98
	8H	21.08	21.68	21.59	22.19	22.67	18.52	19.12	19.03	19.63	20.12
	12H	21.27	21.80	21.78	22.29	22.86	18.68	19.21	19.19	19.70	20.26
12H	4H	20.15	20.88	20.63	21.35	21.82	17.95	18.67	18.43	19.15	19.62
	6H	20.82	21.42	21.34	21.93	22.42	18.39	18.99	18.91	19.50	19.99
	8H	21.11	21.64	21.61	22.13	22.69	18.62	19.15	19.13	19.64	20.21