

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: P243285

Luminaire Tested: S123DRP-H1000D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243285
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-49)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-H1000D927-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

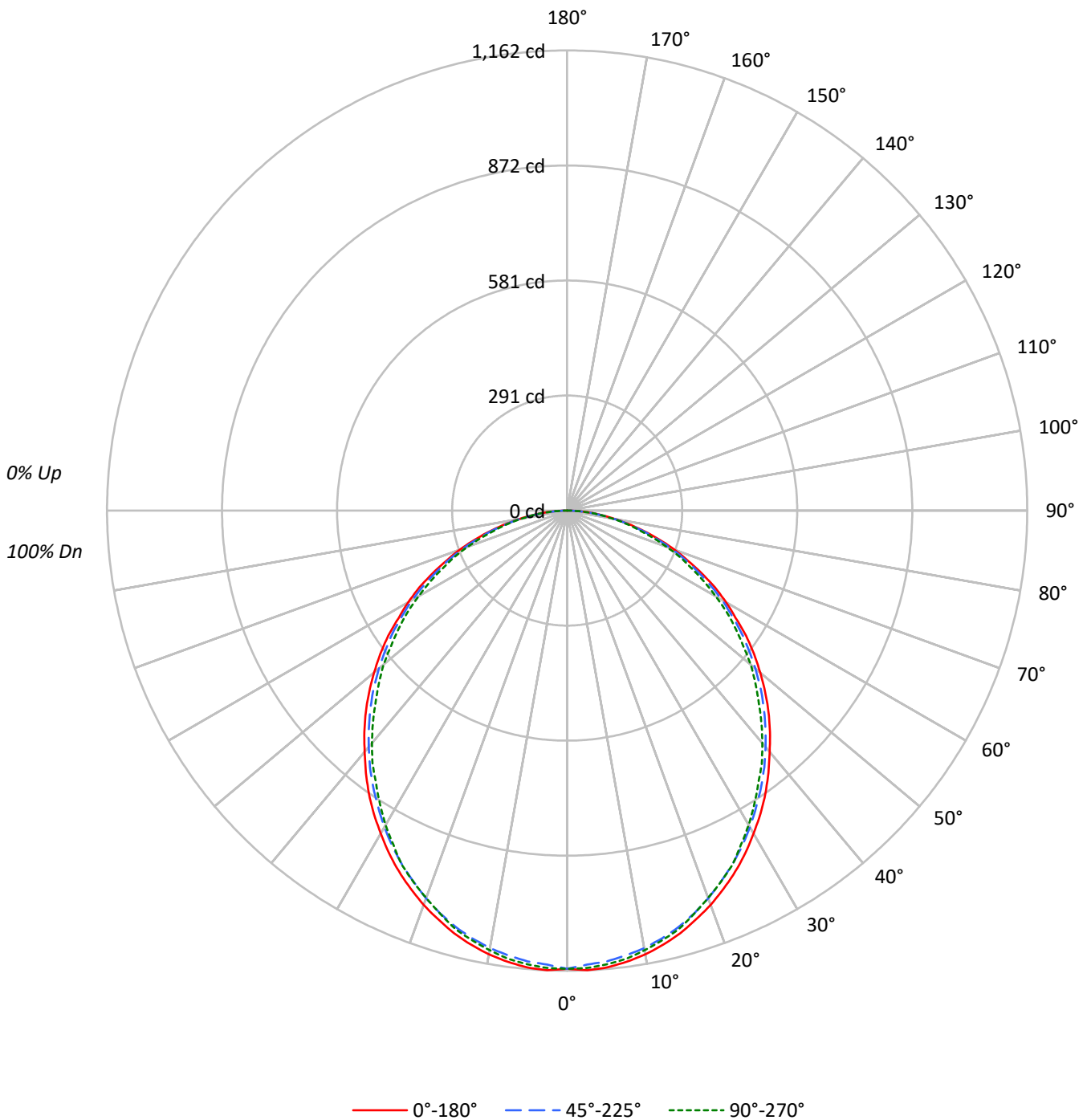
Lumens per Lamp: N/A
Luminaire Lumens: 3060.8 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 31.5
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				100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84				84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70				70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59				59
4	83	71	62	55	80	70	61	55	67	60	54	65	59	54	63	57	53	51				51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44				44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39				39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34				34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30				30
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27				27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25				25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14024	14024	14024
5°	14090	13904	13998
10°	14007	13806	13878
15°	13861	13658	13717
20°	13669	13436	13424
25°	13447	13191	13204
30°	13178	12923	12830
35°	12915	12632	12449
40°	12587	12331	12135
45°	12329	12034	11723
50°	11997	11692	11405
55°	11650	11348	10966
60°	11239	10938	10499
65°	10753	10423	9987
70°	10210	9870	9466
75°	9470	9203	8711
80°	8523	8321	8055
85°	7955	7566	7301

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12329 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.2	3.6
10°-20°	308.7	10.1
20°-30°	457.0	14.9
30°-40°	536.0	17.5
40°-50°	541.9	17.7
50°-60°	479.2	15.7
60°-70°	359.9	11.8
70°-80°	207.4	6.8
80°-90°	61.5	2.0
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°	874.9	28.6
0°-40°	1410.9	46.1
0°-60°	2432.0	79.5
0°-90°	3060.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3060.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1157	1157	1157	1157	1157	
5°	1158	1153	1143	1152	1150	110
15°	1105	1099	1088	1096	1093	311
25°	1005	998	986	991	987	463
35°	873	865	854	851	841	545
45°	719	714	702	692	684	554
55°	551	548	537	526	519	492
65°	375	372	363	354	348	371
75°	202	200	196	191	186	214
85°	57	56	54	53	52	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1157.0	1157.0	1157.0	1157.0	1157.0
2.5°	1161.8	1158.0	1147.5	1158.0	1156.1
5°	1158.0	1153.2	1142.7	1152.3	1150.4
7.5°	1149.4	1144.6	1133.2	1143.7	1141.8
10°	1138.0	1133.2	1121.7	1130.3	1127.5
12.5°	1122.7	1117.9	1106.5	1113.2	1111.3
15°	1104.6	1098.9	1088.4	1096.0	1093.1
17.5°	1082.6	1077.9	1066.4	1076.0	1067.4
20°	1059.7	1055.0	1041.6	1050.2	1040.7
22.5°	1033.0	1027.3	1014.0	1019.7	1014.9
25°	1005.4	997.7	986.3	991.1	987.3
27.5°	974.9	967.2	955.8	957.7	951.0
30°	941.5	934.8	923.3	925.3	916.7
32.5°	908.1	902.4	888.1	888.1	879.5
35°	872.8	865.2	853.7	850.8	841.3
37.5°	834.6	828.0	817.5	812.7	807.0
40°	795.5	791.7	779.3	773.6	766.9
42.5°	758.3	751.6	741.2	733.5	725.9
45°	719.2	713.5	702.0	692.5	683.9
47.5°	678.2	673.4	662.0	651.5	644.8
50°	636.2	632.4	620.0	608.6	604.8
52.5°	595.2	590.4	578.0	567.6	559.9
55°	551.3	547.5	537.0	526.5	518.9
57.5°	504.6	504.6	493.1	483.6	477.9
60°	463.6	458.8	451.2	440.7	433.1
62.5°	420.7	417.8	407.3	396.8	391.1
65°	374.9	372.0	363.4	353.9	348.2
67.5°	330.0	329.1	321.5	313.8	310.0
70°	288.1	286.2	278.5	270.9	267.1
72.5°	245.1	243.2	236.6	229.9	225.1
75°	202.2	200.3	196.5	190.8	186.0
77.5°	160.2	160.2	155.5	153.6	151.7
80°	122.1	121.1	119.2	117.3	115.4
82.5°	87.8	86.8	84.9	83.9	83.9
85°	57.2	56.3	54.4	53.4	52.5
87.5°	29.6	27.7	26.7	24.8	23.8
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	20.63	22.25	20.99	22.57	22.88	20.32	21.94	20.68	22.26	22.57
	3H	22.42	23.89	22.80	24.22	24.58	22.07	23.54	22.45	23.87	24.23
	4H	23.10	24.49	23.50	24.83	25.21	22.72	24.10	23.12	24.45	24.83
	6H	23.60	24.88	24.01	25.25	25.64	23.22	24.50	23.63	24.87	25.26
	8H	23.77	24.99	24.19	25.38	25.78	23.39	24.62	23.82	25.01	25.41
	12H	23.89	25.06	24.32	25.45	25.87	23.51	24.69	23.94	25.07	25.50
4H	2H	21.22	22.60	21.61	22.95	23.32	20.97	22.36	21.37	22.70	23.08
	3H	23.24	24.40	23.65	24.80	25.20	22.95	24.11	23.36	24.50	24.90
	4H	24.05	25.10	24.48	25.52	25.95	23.73	24.78	24.16	25.19	25.62
	6H	24.68	25.60	25.14	26.04	26.50	24.36	25.27	24.81	25.71	26.17
	8H	24.90	25.76	25.36	26.20	26.67	24.58	25.44	25.04	25.88	26.34
	12H	25.07	25.85	25.55	26.32	26.79	24.74	25.52	25.22	25.99	26.46
8H	4H	24.35	25.21	24.81	25.65	26.11	24.06	24.92	24.52	25.36	25.83
	6H	25.10	25.82	25.59	26.30	26.78	24.81	25.53	25.31	26.02	26.49
	8H	25.40	26.04	25.91	26.55	27.03	25.11	25.76	25.62	26.26	26.75
	12H	25.66	26.22	26.16	26.71	27.27	25.36	25.93	25.87	26.42	26.98
12H	4H	24.38	25.15	24.86	25.63	26.10	24.10	24.87	24.58	25.35	25.82
	6H	25.15	25.80	25.66	26.31	26.79	24.88	25.52	25.39	26.03	26.52
	8H	25.51	26.08	26.02	26.57	27.13	25.24	25.81	25.75	26.30	26.86