

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: P242454

Luminaire Tested: S123DRP-S1000D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242454
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-11)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-S1000D940-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

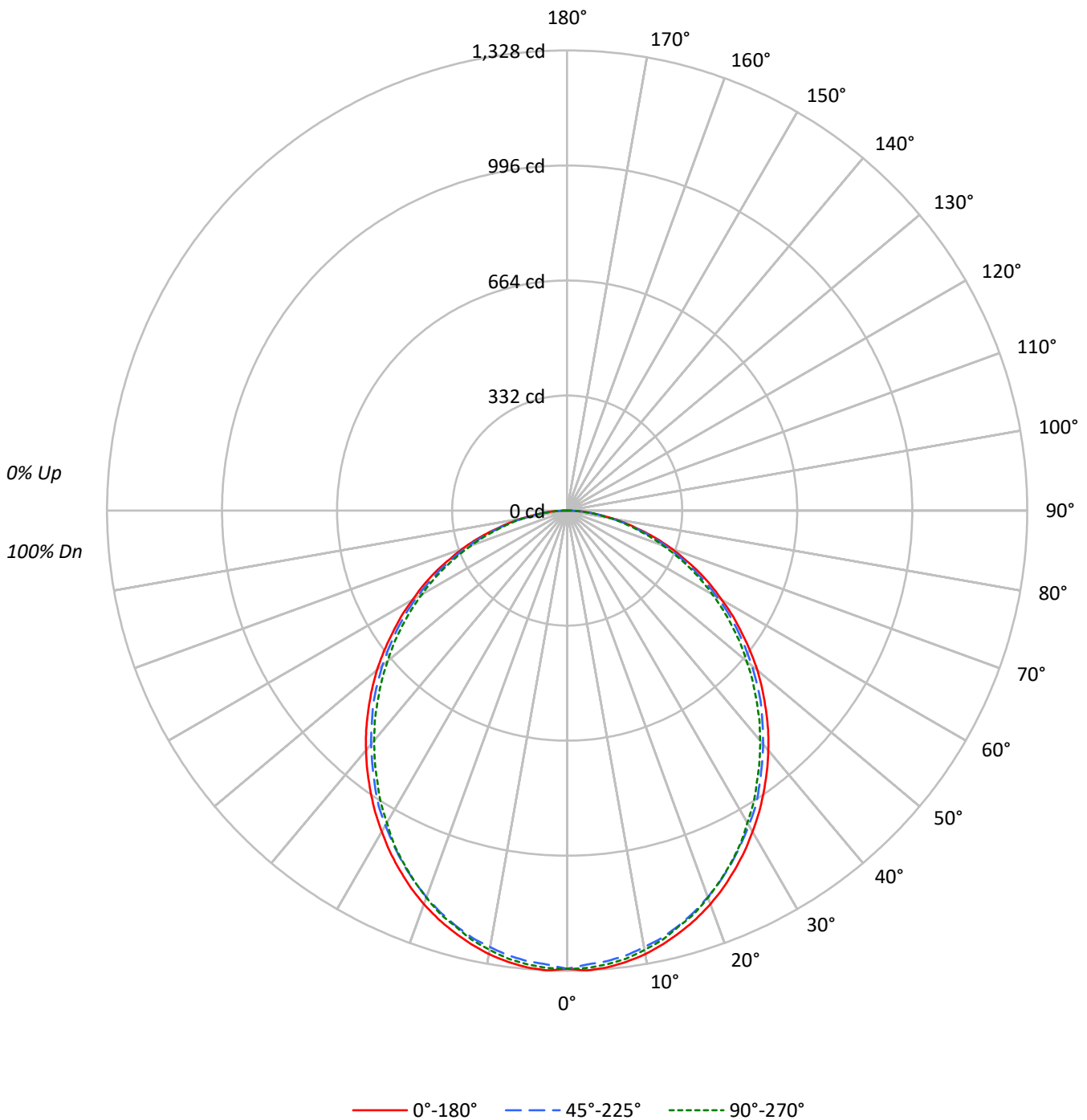
Lumens per Lamp: N/A
Luminaire Lumens: 3441.9 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16030	16030	16030
5°	16105	15883	15994
10°	15998	15746	15844
15°	15812	15568	15597
20°	15592	15314	15328
25°	15300	15011	14981
30°	14978	14675	14563
35°	14639	14319	14134
40°	14287	13928	13711
45°	13899	13568	13235
50°	13509	13123	12759
55°	13001	12665	12280
60°	12487	12128	11743
65°	12035	11547	11186
70°	11366	10880	10398
75°	10383	10013	9587
80°	9368	8970	8893
85°	8219	7913	7594

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13899 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.7	3.6
10°-20°	352.0	10.2
20°-30°	519.9	15.1
30°-40°	607.2	17.6
40°-50°	610.5	17.7
50°-60°	536.3	15.6
60°-70°	399.4	11.6
70°-80°	227.3	6.6
80°-90°	64.6	1.9
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°	996.7	29.0
0°-40°	1603.9	46.6
0°-60°	2750.6	79.9
0°-90°	3441.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3441.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1322	1322	1322	1322	1322	
5°	1324	1318	1305	1317	1314	126
15°	1260	1255	1241	1250	1243	355
25°	1144	1137	1122	1124	1120	527
35°	989	982	968	961	955	619
45°	811	806	792	778	772	626
55°	615	614	599	587	581	551
65°	420	414	403	394	390	414
75°	222	217	214	208	205	237
85°	59	57	57	55	55	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1322.5	1322.5	1322.5	1322.5	1322.5
2.5°	1328.2	1323.6	1311.1	1322.5	1321.4
5°	1323.6	1318.0	1305.4	1316.8	1314.5
7.5°	1313.4	1307.7	1295.2	1305.4	1304.3
10°	1299.8	1294.1	1279.3	1289.5	1287.3
12.5°	1281.6	1277.0	1263.4	1270.2	1269.1
15°	1260.0	1255.4	1240.6	1249.7	1242.9
17.5°	1236.1	1230.4	1215.6	1222.4	1220.2
20°	1208.8	1202.0	1187.2	1191.7	1188.3
22.5°	1178.1	1171.3	1156.5	1159.9	1155.3
25°	1144.0	1137.1	1122.4	1123.5	1120.1
27.5°	1108.7	1101.9	1086.0	1087.1	1083.7
30°	1070.1	1064.4	1048.5	1048.5	1040.5
32.5°	1031.4	1023.4	1012.1	1004.1	1000.7
35°	989.3	982.5	967.7	960.9	955.2
37.5°	947.2	938.1	923.4	915.4	912.0
40°	902.9	896.1	880.2	871.1	866.5
42.5°	858.5	850.6	834.7	825.6	821.0
45°	810.8	806.2	791.5	777.8	772.1
47.5°	764.2	757.3	743.7	730.0	725.5
50°	716.4	710.7	695.9	683.4	676.6
52.5°	666.4	663.0	647.0	636.8	630.0
55°	615.2	614.1	599.3	586.8	581.1
57.5°	567.4	562.9	551.5	540.1	533.3
60°	515.1	514.0	500.3	490.1	484.4
62.5°	468.5	465.1	451.4	441.2	437.8
65°	419.6	413.9	402.6	393.5	390.0
67.5°	367.3	362.8	353.7	345.7	341.1
70°	320.7	313.9	307.0	299.1	293.4
72.5°	271.8	267.2	259.3	252.4	250.2
75°	221.7	217.2	213.8	208.1	204.7
77.5°	177.4	175.1	170.6	166.0	166.0
80°	134.2	130.8	128.5	127.4	127.4
82.5°	92.1	92.1	92.1	89.8	88.7
85°	59.1	56.9	56.9	54.6	54.6
87.5°	29.6	26.2	25.0	23.9	23.9
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	21.00	22.62	21.36	22.93	23.24	20.68	22.30	21.05	22.61	22.93
	3H	22.77	24.23	23.14	24.56	24.92	22.40	23.86	22.77	24.19	24.55
	4H	23.43	24.80	23.82	25.15	25.53	23.04	24.41	23.43	24.76	25.14
	6H	23.91	25.19	24.32	25.55	25.95	23.52	24.80	23.93	25.16	25.55
	8H	24.07	25.29	24.49	25.67	26.07	23.68	24.90	24.11	25.29	25.69
	12H	24.17	25.34	24.60	25.72	26.15	23.79	24.96	24.22	25.34	25.77
4H	2H	21.58	22.95	21.97	23.30	23.68	21.33	22.70	21.72	23.05	23.43
	3H	23.57	24.72	23.98	25.12	25.52	23.26	24.42	23.67	24.81	25.21
	4H	24.35	25.40	24.79	25.81	26.25	24.02	25.07	24.46	25.48	25.92
	6H	24.97	25.88	25.43	26.33	26.78	24.64	25.55	25.09	25.99	26.45
	8H	25.17	26.03	25.63	26.47	26.93	24.84	25.70	25.30	26.14	26.61
	12H	25.33	26.09	25.81	26.57	27.04	24.99	25.76	25.47	26.24	26.71
8H	4H	24.64	25.49	25.10	25.93	26.40	24.35	25.20	24.81	25.64	26.11
	6H	25.38	26.09	25.87	26.57	27.05	25.08	25.79	25.58	26.28	26.76
	8H	25.65	26.29	26.16	26.79	27.28	25.36	26.00	25.87	26.51	26.99
	12H	25.88	26.44	26.38	26.93	27.49	25.59	26.15	26.09	26.64	27.20
12H	4H	24.67	25.43	25.15	25.91	26.38	24.38	25.15	24.86	25.63	26.10
	6H	25.43	26.06	25.94	26.57	27.06	25.14	25.78	25.65	26.29	26.77
	8H	25.76	26.32	26.27	26.81	27.37	25.48	26.05	25.99	26.54	27.10