

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: P242529

Luminaire Tested: S123RDRP-S1165D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242529
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S1165D927-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

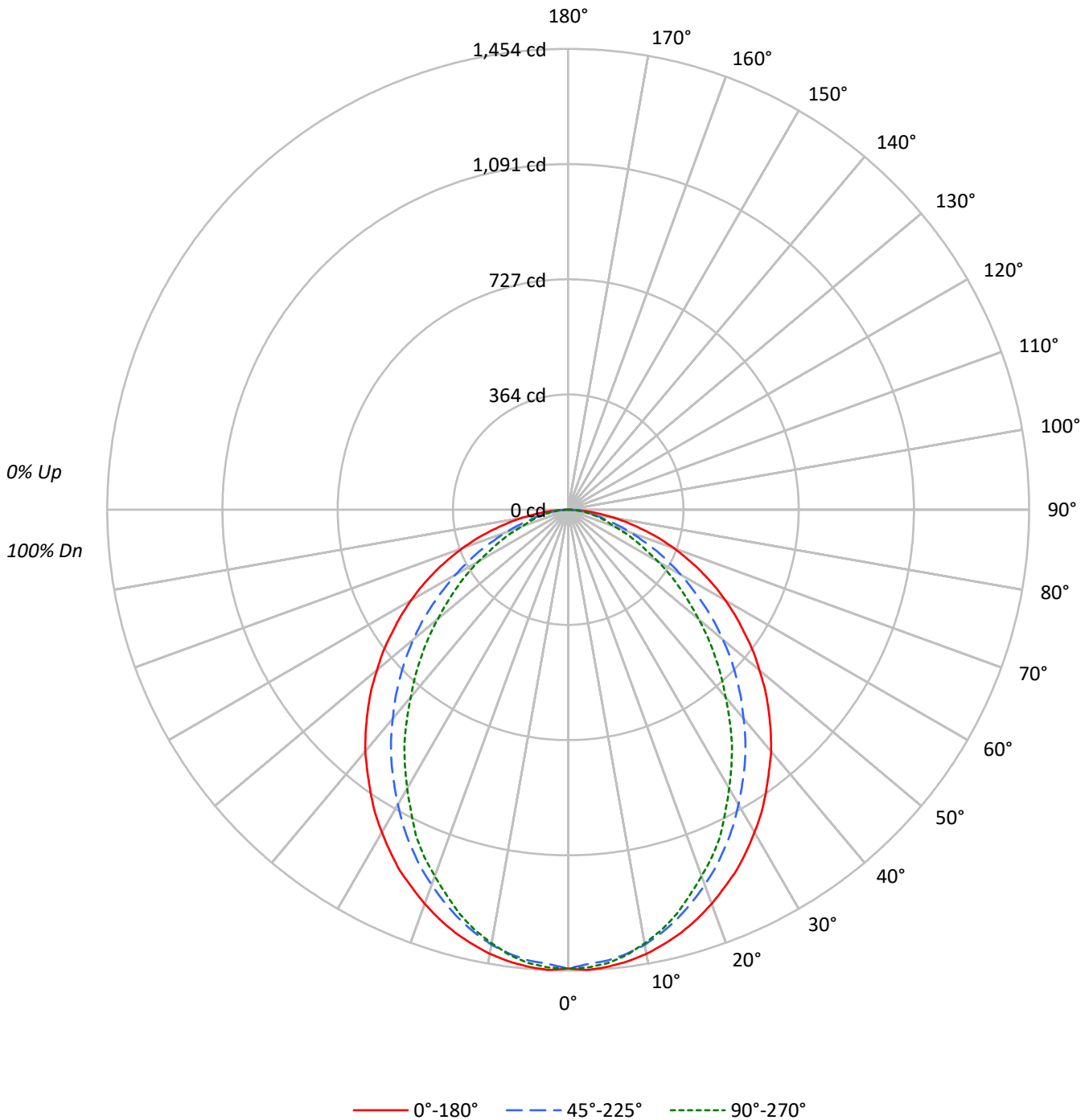
Lumens per Lamp: N/A
Luminaire Lumens: 3270.5 lumens
Efficiency: N/A
Efficacy: 79.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
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	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	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88					86				
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75					73				
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64					62				
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56					54				
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49					47				
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44					42				
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39					37				
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35					34				
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32					30				
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29					28				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17547	17547	17547
5°	17614	17372	17471
10°	17515	17153	17095
15°	17326	16751	16574
20°	17068	16250	15871
25°	16802	15687	15184
30°	16450	15036	14215
35°	16088	14384	13325
40°	15754	13617	12223
45°	15316	12860	11230
50°	14833	11999	10119
55°	14341	11016	9081
60°	13888	9961	7942
65°	13302	8822	6803
70°	12567	7407	5493
75°	11493	5831	5170
80°	10247	5165	4754
85°	8650	4576	4242

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15316 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.1	4.2
10°-20°	378.6	11.6
20°-30°	545.1	16.7
30°-40°	613.8	18.8
40°-50°	587.2	18.0
50°-60°	480.7	14.7
60°-70°	324.1	9.9
70°-80°	162.5	5.0
80°-90°	42.5	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°	1059.7	32.4
0°-40°	1673.6	51.2
0°-60°	2741.4	83.8
0°-90°	3270.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3270.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1448	1442	1428	1438	1436	137
15°	1381	1368	1335	1329	1321	389
25°	1256	1227	1173	1148	1135	578
35°	1087	1045	972	922	900	680
45°	894	841	750	683	655	690
55°	679	621	521	453	430	609
65°	464	399	308	250	237	459
75°	245	189	124	113	110	261
85°	62	36	33	30	30	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1447.6	1447.6	1447.6	1447.6	1447.6
2.5°	1453.5	1448.8	1434.7	1447.6	1445.3
5°	1447.6	1441.8	1427.7	1438.2	1435.9
7.5°	1437.1	1431.2	1413.6	1420.6	1417.1
10°	1423.0	1414.8	1393.6	1394.8	1388.9
12.5°	1403.0	1393.6	1366.6	1365.5	1358.4
15°	1380.7	1367.8	1334.9	1329.1	1320.8
17.5°	1353.7	1339.6	1298.5	1286.8	1275.0
20°	1323.2	1304.4	1259.8	1244.5	1230.4
22.5°	1289.1	1266.8	1218.7	1198.7	1185.8
25°	1256.3	1226.9	1172.9	1148.2	1135.3
27.5°	1216.3	1184.6	1125.9	1093.1	1073.1
30°	1175.3	1140.0	1074.3	1034.4	1015.6
32.5°	1134.2	1093.1	1022.6	978.0	958.0
35°	1087.2	1044.9	972.1	921.7	900.5
37.5°	1040.2	994.4	918.1	861.8	835.9
40°	995.6	944.0	860.6	799.5	772.5
42.5°	945.1	893.5	806.6	738.5	715.0
45°	893.5	840.6	750.2	683.3	655.1
47.5°	843.0	784.3	695.1	622.3	597.6
50°	786.6	731.5	636.3	563.6	536.6
52.5°	736.1	675.1	581.2	504.9	481.4
55°	678.6	621.1	521.3	453.2	429.7
57.5°	627.0	564.7	463.8	399.2	379.2
60°	572.9	508.4	410.9	347.5	327.6
62.5°	518.9	454.4	356.9	298.2	277.1
65°	463.8	399.2	307.6	250.1	237.2
67.5°	408.6	342.8	253.6	210.2	196.1
70°	354.6	291.2	209.0	167.9	155.0
72.5°	300.6	238.3	165.5	133.8	130.3
75°	245.4	189.0	124.5	112.7	110.4
77.5°	194.9	143.2	97.4	90.4	88.1
80°	146.8	98.6	74.0	70.4	68.1
82.5°	101.0	61.1	52.8	49.3	49.3
85°	62.2	36.4	32.9	30.5	30.5
87.5°	28.2	15.3	15.3	14.1	12.9
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	21.40	22.96	21.77	23.27	23.59	18.77	20.33	19.14	20.64	20.96
	3H	23.18	24.58	23.56	24.90	25.27	19.88	21.28	20.26	21.61	21.97
	4H	23.84	25.15	24.24	25.50	25.88	20.28	21.59	20.68	21.94	22.32
	6H	24.32	25.53	24.73	25.90	26.29	20.60	21.81	21.01	22.18	22.57
	8H	24.47	25.63	24.90	26.02	26.42	20.71	21.86	21.13	22.25	22.65
	12H	24.57	25.68	25.00	26.06	26.49	20.78	21.89	21.21	22.27	22.70
4H	2H	21.66	22.97	22.06	23.32	23.70	19.49	20.80	19.89	21.15	21.52
	3H	23.62	24.71	24.03	25.11	25.51	20.76	21.85	21.17	22.25	22.65
	4H	24.39	25.38	24.83	25.79	26.23	21.24	22.23	21.68	22.64	23.08
	6H	24.99	25.85	25.45	26.29	26.75	21.66	22.52	22.12	22.96	23.42
	8H	25.18	25.98	25.64	26.43	26.89	21.81	22.61	22.27	23.05	23.52
	12H	25.33	26.04	25.81	26.52	26.99	21.92	22.63	22.40	23.11	23.58
8H	4H	24.45	25.25	24.91	25.69	26.16	21.56	22.36	22.03	22.81	23.28
	6H	25.11	25.77	25.61	26.26	26.74	22.08	22.74	22.57	23.23	23.71
	8H	25.34	25.94	25.86	26.45	26.93	22.28	22.88	22.79	23.38	23.87
	12H	25.55	26.07	26.05	26.56	27.13	22.45	22.98	22.96	23.47	24.03
12H	4H	24.44	25.15	24.92	25.63	26.10	21.61	22.32	22.09	22.80	23.27
	6H	25.10	25.69	25.61	26.20	26.69	22.14	22.73	22.65	23.24	23.73
	8H	25.37	25.89	25.88	26.39	26.95	22.39	22.92	22.90	23.41	23.97