

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: P243387

Luminaire Tested: S123RDRP-H775D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243387
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-64)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-H775D927-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

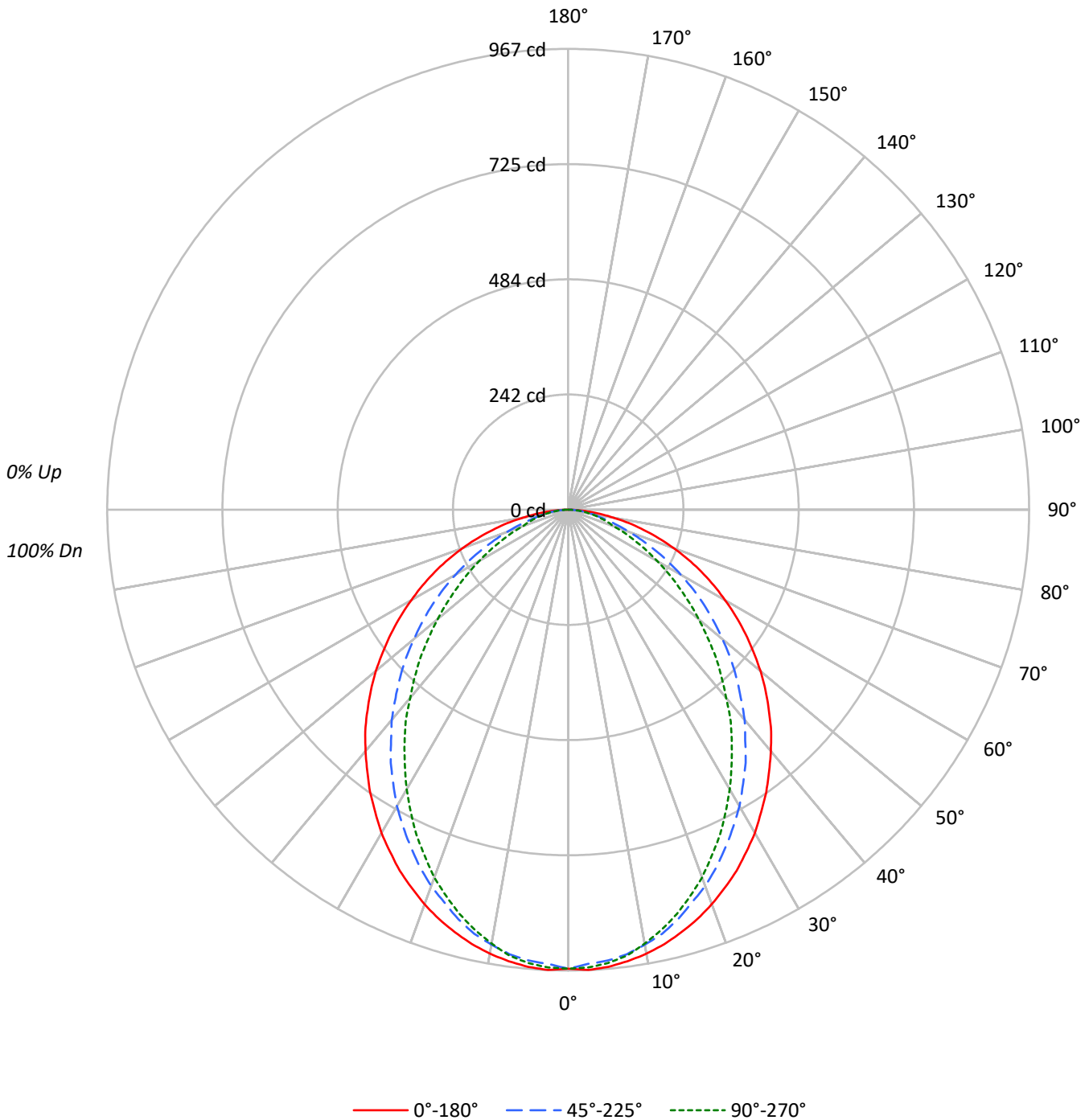
Lumens per Lamp: N/A
Luminaire Lumens: 2174.3 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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

TEST NUMBER: P243387

CATALOG NUMBER: S123RDRP-H775D927-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P243387

CATALOG NUMBER: S123RDRP-H775D927-X4F0-XX-UDD-F-W

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	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	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86																												
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73																												
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	62																												
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54																												
5	78	66	58	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	56	49	44	54	48	44	42																												
7	67	55	46	40	66	54	46	40	52	45	40	51	44	40	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	30	39	34	29	28																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11673	11673	11673
5°	11717	11555	11619
10°	11644	11407	11380
15°	11519	11166	11027
20°	11363	10838	10590
25°	11178	10447	10071
30°	10963	10052	9483
35°	10715	9599	8855
40°	10462	9105	8157
45°	10206	8559	7506
50°	9930	7963	6751
55°	9596	7346	5987
60°	9217	6616	5217
65°	8845	5791	4454
70°	8336	4848	3565
75°	7690	3845	3395
80°	6715	3406	3099
85°	5660	2976	2879

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10206 cd/sqm



TEST NUMBER: P243387

CATALOG NUMBER: S123RDRP-H775D927-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.6	4.2
10°-20°	252.2	11.6
20°-30°	363.1	16.7
30°-40°	409.0	18.8
40°-50°	390.7	18.0
50°-60°	319.5	14.7
60°-70°	214.5	9.9
70°-80°	107.0	4.9
80°-90°	27.7	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°	705.9	32.5
0°-40°	1114.9	51.3
0°-60°	1825.1	83.9
0°-90°	2174.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2174.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	963	963	963	963	963	
5°	963	959	950	957	955	91
15°	918	911	890	885	879	259
25°	836	817	781	764	753	385
35°	724	696	649	612	598	453
45°	595	560	499	456	438	460
55°	454	414	348	300	283	406
65°	308	266	202	165	155	305
75°	164	125	82	74	72	174
85°	41	24	21	20	21	47
90°	0	0	0	0	0	



TEST NUMBER: P243387

CATALOG NUMBER: S123RDRP-H775D927-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	963.0	963.0	963.0	963.0	963.0	963.0	963.0	963.0	963.0	963.0	963.0
2.5°	966.7	964.5	961.5	962.3	963.0	963.8	963.8	963.0	960.8	957.8	954.1
5°	963.0	960.8	957.8	957.8	959.3	959.3	959.3	958.6	956.4	953.4	949.7
7.5°	955.6	954.1	950.4	951.2	951.9	951.9	951.9	951.2	948.2	944.5	940.8
10°	946.0	943.8	940.8	940.8	941.6	941.6	941.6	940.1	936.4	932.0	926.8
12.5°	933.4	931.2	928.3	928.3	928.3	928.3	928.3	926.0	920.1	915.7	911.2
15°	917.9	915.7	912.7	912.7	912.0	911.2	909.8	906.1	900.9	895.7	889.8
17.5°	900.9	897.9	894.2	893.5	892.8	892.0	889.8	887.6	880.2	872.8	863.9
20°	880.9	878.0	874.3	873.5	871.3	869.1	867.6	863.2	855.0	846.2	840.2
22.5°	858.7	855.8	852.1	850.6	846.2	844.7	842.5	835.8	826.9	818.8	812.1
25°	835.8	832.1	827.7	825.4	820.3	817.3	816.6	807.0	798.1	789.2	781.1
27.5°	809.2	806.2	802.5	798.1	792.9	789.2	787.7	778.8	767.8	757.4	750.0
30°	783.3	778.8	775.1	770.0	762.6	758.9	755.9	747.0	737.4	724.9	718.2
32.5°	753.0	750.0	745.6	740.4	733.0	730.0	725.6	714.5	701.9	693.0	682.7
35°	724.1	721.2	714.5	709.3	699.0	696.0	691.6	682.0	667.9	657.5	648.7
37.5°	692.3	688.6	683.4	676.0	667.2	663.5	657.5	647.9	631.7	621.3	610.2
40°	661.2	656.1	650.1	642.0	633.1	629.4	624.3	610.2	596.9	585.1	575.4
42.5°	630.2	624.3	616.9	609.5	599.9	594.7	588.8	575.4	560.7	549.6	536.2
45°	595.4	591.0	583.6	574.7	563.6	559.9	553.3	539.2	524.4	512.6	499.3
47.5°	561.4	556.2	548.8	539.9	528.8	523.7	517.0	503.0	488.2	473.4	461.5
50°	526.6	521.4	512.6	503.7	493.3	486.7	480.8	466.7	450.4	437.1	422.3
52.5°	489.6	485.2	477.8	468.9	455.6	450.4	444.5	429.0	413.5	397.9	384.6
55°	454.1	451.2	442.3	433.4	419.4	413.5	407.5	391.3	375.7	360.2	347.6
57.5°	417.2	414.9	406.1	395.7	383.1	377.2	369.8	353.5	338.8	323.2	309.9
60°	380.2	378.0	369.1	358.7	346.9	339.5	331.4	318.8	301.8	287.7	272.9
62.5°	344.7	341.7	334.3	323.2	309.9	302.5	295.1	280.3	264.8	250.0	236.7
65°	308.4	304.7	295.9	284.8	272.2	265.5	258.1	244.1	228.5	214.5	201.9
67.5°	272.2	268.5	258.9	250.0	235.2	228.5	221.9	207.8	193.0	179.0	167.2
70°	235.2	231.5	224.1	212.3	199.7	193.0	186.4	171.6	158.3	147.9	136.8
72.5°	199.0	196.0	188.6	177.5	165.7	159.0	151.6	139.1	127.2	116.1	108.0
75°	164.2	159.8	153.1	142.8	130.9	125.0	119.8	107.2	96.2	88.8	82.1
77.5°	130.9	125.7	118.3	110.2	99.1	93.2	88.0	77.7	70.3	65.1	63.6
80°	96.2	95.4	88.0	79.1	69.5	65.1	59.9	53.3	51.0	50.3	48.8
82.5°	67.3	64.3	58.4	50.3	42.9	39.9	38.5	37.0	35.5	35.5	34.0
85°	40.7	37.7	32.5	25.9	24.4	23.7	22.9	22.9	22.2	21.4	21.4
87.5°	17.8	14.8	11.1	10.4	9.6	9.6	10.4	10.4	10.4	9.6	9.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243387

CATALOG NUMBER: S123RDRP-H775D927-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	963.0	963.0	963.0	963.0	963.0	963.0	963.0	963.0	963.0	963.0
2.5°	955.6	959.3	961.5	962.3	962.3	962.3	963.0	963.0	962.3	961.5
5°	950.4	954.1	955.6	957.1	957.1	957.1	957.1	957.1	956.4	954.9
7.5°	942.3	944.5	946.7	946.0	946.0	945.3	944.5	945.3	943.8	943.8
10°	927.5	929.7	931.2	929.0	929.0	929.7	929.7	929.0	926.8	924.6
12.5°	910.5	912.7	910.5	911.2	909.8	908.3	907.5	906.8	904.6	903.1
15°	888.3	888.3	886.8	886.8	884.6	881.7	880.9	881.7	878.7	878.7
17.5°	863.9	862.4	860.2	858.7	858.0	858.0	855.0	855.0	851.3	850.6
20°	837.3	835.8	833.6	829.9	828.4	829.1	826.2	824.0	821.7	821.0
22.5°	809.2	805.5	803.3	799.6	796.6	796.6	794.4	790.7	788.5	786.2
25°	777.4	773.7	769.2	766.3	764.1	760.4	758.9	755.9	753.7	753.0
27.5°	744.8	738.9	733.0	730.0	728.5	724.1	721.9	720.4	716.0	715.2
30°	710.1	705.6	698.2	693.0	689.3	690.1	684.9	682.0	679.7	677.5
32.5°	676.8	669.4	662.0	655.3	650.9	650.1	645.0	642.0	639.8	637.6
35°	639.1	631.7	622.8	616.9	612.4	610.2	605.0	603.5	599.9	598.4
37.5°	601.3	593.2	584.3	576.9	574.0	568.8	566.6	562.9	559.9	559.9
40°	564.3	554.7	545.9	537.0	533.3	530.3	524.4	521.4	517.8	515.5
42.5°	525.9	514.8	506.7	498.5	493.3	491.1	484.5	480.8	477.1	476.3
45°	487.4	476.3	466.0	457.8	455.6	451.2	444.5	439.3	438.6	437.9
47.5°	448.2	437.1	427.5	418.6	415.7	410.5	406.1	402.4	397.9	395.7
50°	410.5	399.4	389.1	379.4	375.7	371.3	366.9	361.7	360.2	358.0
52.5°	372.8	360.2	349.1	340.2	337.3	333.6	328.4	324.0	321.7	320.3
55°	334.3	321.7	312.1	303.3	299.6	297.3	291.4	287.7	284.8	283.3
57.5°	296.6	284.0	275.1	268.5	263.3	261.1	255.2	251.5	250.0	249.3
60°	261.1	249.3	239.6	233.0	228.5	226.3	221.9	218.2	216.0	215.2
62.5°	225.6	215.2	206.4	199.7	196.7	193.8	190.1	187.1	184.9	184.9
65°	191.6	181.2	173.1	167.9	164.9	163.5	159.0	157.5	155.3	155.3
67.5°	158.3	150.9	145.0	138.3	136.1	136.1	131.7	130.2	128.7	128.7
70°	129.4	122.8	116.1	112.4	110.2	109.5	105.8	103.6	102.1	100.6
72.5°	101.3	95.4	89.5	88.8	88.8	88.0	88.0	86.5	86.5	87.3
75°	77.7	76.2	74.7	74.7	74.0	73.2	73.2	72.5	72.5	72.5
77.5°	62.1	61.4	60.7	59.9	59.9	59.2	58.4	58.4	58.4	58.4
80°	47.3	46.6	46.6	45.9	45.1	45.9	45.1	45.1	44.4	44.4
82.5°	33.3	33.3	33.3	32.5	32.5	32.5	32.5	31.8	31.8	32.5
85°	20.7	20.7	20.7	20.7	20.0	20.7	20.0	20.0	20.0	20.7
87.5°	8.9	9.6	8.9	9.6	9.6	8.9	8.9	8.9	8.9	8.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243387

CATALOG NUMBER: S123RDRP-H775D927-X4F0-XX-UDD-F-W

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	20.06	21.62	20.43	21.93	22.24	17.26	18.81	17.62	19.12	19.44
	3H	21.89	23.29	22.27	23.61	23.97	18.33	19.73	18.71	20.05	20.42
	4H	22.58	23.89	22.97	24.23	24.61	18.73	20.04	19.13	20.39	20.76
	6H	23.07	24.29	23.49	24.65	25.04	19.05	20.26	19.46	20.63	21.02
	8H	23.23	24.39	23.66	24.78	25.18	19.16	20.31	19.58	20.70	21.10
	12H	23.33	24.44	23.76	24.82	25.25	19.23	20.34	19.66	20.72	21.15
4H	2H	20.30	21.61	20.70	21.96	22.34	17.97	19.28	18.37	19.63	20.01
	3H	22.29	23.38	22.70	23.78	24.18	19.20	20.29	19.61	20.69	21.09
	4H	23.08	24.06	23.51	24.48	24.92	19.68	20.66	20.12	21.08	21.52
	6H	23.70	24.55	24.16	25.00	25.45	20.10	20.96	20.56	21.40	21.86
	8H	23.90	24.70	24.36	25.14	25.61	20.25	21.05	20.71	21.49	21.96
	12H	24.05	24.76	24.53	25.24	25.71	20.36	21.07	20.84	21.55	22.02
8H	4H	23.12	23.92	23.58	24.36	24.83	20.00	20.80	20.46	21.24	21.71
	6H	23.79	24.45	24.28	24.94	25.41	20.52	21.18	21.01	21.67	22.14
	8H	24.03	24.62	24.54	25.13	25.62	20.72	21.31	21.23	21.82	22.31
	12H	24.22	24.74	24.73	25.23	25.80	20.89	21.42	21.40	21.91	22.47
12H	4H	23.11	23.82	23.59	24.30	24.77	20.04	20.75	20.52	21.23	21.70
	6H	23.77	24.36	24.28	24.87	25.36	20.57	21.16	21.08	21.67	22.16
	8H	24.05	24.57	24.56	25.06	25.63	20.83	21.35	21.34	21.84	22.41