

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: P242556

Luminaire Tested: S123RDRP-S775D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242556
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-S775D940-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

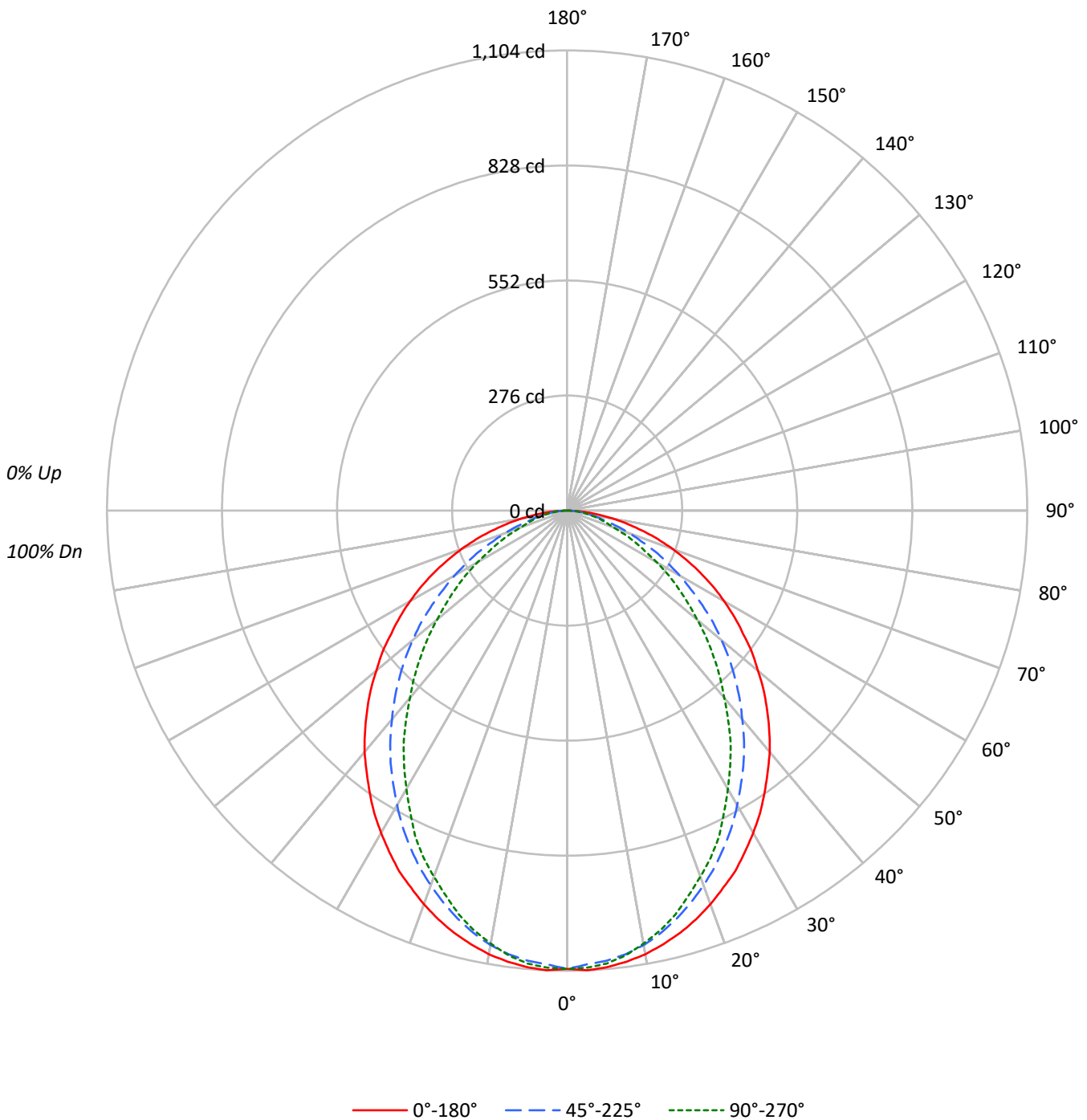
Lumens per Lamp: N/A
Luminaire Lumens: 2483.9 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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: P242556

CATALOG NUMBER: S123RDRP-S775D940-X4F0-XX-UDD-F-W

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13327	13327	13327
5°	13378	13193	13270
10°	13303	13028	12984
15°	13160	12723	12589
20°	12964	12342	12054
25°	12760	11914	11533
30°	12493	11420	10795
35°	12218	10925	10120
40°	11965	10342	9283
45°	11633	9768	8530
50°	11265	9114	7684
55°	10892	8366	6898
60°	10550	7566	6032
65°	10102	6700	5165
70°	9544	5624	4171
75°	8730	4426	3925
80°	7783	3923	3609
85°	6578	3477	3227

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11633 cd/sqm



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CATALOG NUMBER: S123RDRP-S775D940-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.4	4.2
10°-20°	287.5	11.6
20°-30°	414.0	16.7
30°-40°	466.2	18.8
40°-50°	446.0	18.0
50°-60°	365.0	14.7
60°-70°	246.1	9.9
70°-80°	123.4	5.0
80°-90°	32.3	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°	804.9	32.4
0°-40°	1271.1	51.2
0°-60°	2082.1	83.8
0°-90°	2483.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2483.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1100	1095	1084	1092	1091	104
15°	1049	1039	1014	1009	1003	296
25°	954	932	891	872	862	439
35°	826	794	738	700	684	517
45°	679	638	570	519	498	524
55°	515	472	396	344	326	462
65°	352	303	234	190	180	349
75°	186	144	94	86	84	199
85°	47	28	25	23	23	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1099.5	1099.5	1099.5	1099.5	1099.5
2.5°	1103.9	1100.4	1089.7	1099.5	1097.7
5°	1099.5	1095.0	1084.3	1092.3	1090.6
7.5°	1091.5	1087.0	1073.6	1079.0	1076.3
10°	1080.8	1074.5	1058.5	1059.4	1054.9
12.5°	1065.6	1058.5	1038.0	1037.1	1031.7
15°	1048.7	1038.8	1013.9	1009.4	1003.2
17.5°	1028.1	1017.4	986.2	977.3	968.4
20°	1005.0	990.7	956.8	945.2	934.5
22.5°	979.1	962.2	925.6	910.4	900.6
25°	954.1	931.8	890.8	872.1	862.3
27.5°	923.8	899.7	855.2	830.2	815.0
30°	892.6	865.9	815.9	785.6	771.3
32.5°	861.4	830.2	776.7	742.8	727.6
35°	825.7	793.6	738.3	700.0	683.9
37.5°	790.1	755.3	697.3	654.5	634.9
40°	756.2	716.9	653.6	607.3	586.7
42.5°	717.8	678.6	612.6	560.9	543.1
45°	678.6	638.5	569.8	519.0	497.6
47.5°	640.2	595.7	527.9	472.6	453.9
50°	597.4	555.5	483.3	428.0	407.5
52.5°	559.1	512.7	441.4	383.4	365.6
55°	515.4	471.7	395.9	344.2	326.4
57.5°	476.2	428.9	352.2	303.2	288.0
60°	435.2	386.1	312.1	263.9	248.8
62.5°	394.1	345.1	271.1	226.5	210.4
65°	352.2	303.2	233.6	189.9	180.1
67.5°	310.3	260.4	192.6	159.6	148.9
70°	269.3	221.1	158.7	127.5	117.7
72.5°	228.3	181.0	125.7	101.7	99.0
75°	186.4	143.6	94.5	85.6	83.8
77.5°	148.0	108.8	74.0	68.7	66.9
80°	111.5	74.9	56.2	53.5	51.7
82.5°	76.7	46.4	40.1	37.5	37.5
85°	47.3	27.6	25.0	23.2	23.2
87.5°	21.4	11.6	11.6	10.7	9.8
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	20.45	22.00	20.81	22.31	22.63	17.82	19.37	18.18	19.69	20.00
	3H	22.22	23.62	22.60	23.95	24.31	18.93	20.33	19.31	20.65	21.01
	4H	22.88	24.20	23.28	24.54	24.92	19.32	20.64	19.72	20.98	21.36
	6H	23.36	24.58	23.78	24.94	25.34	19.64	20.86	20.05	21.22	21.61
	8H	23.52	24.67	23.94	25.06	25.46	19.75	20.91	20.18	21.30	21.70
	12H	23.62	24.72	24.05	25.11	25.54	19.83	20.93	20.26	21.32	21.75
4H	2H	20.71	22.02	21.10	22.37	22.74	18.53	19.84	18.93	20.19	20.57
	3H	22.67	23.76	23.08	24.16	24.56	19.81	20.90	20.22	21.30	21.70
	4H	23.44	24.42	23.87	24.84	25.27	20.29	21.27	20.72	21.69	22.12
	6H	24.03	24.89	24.49	25.33	25.79	20.71	21.56	21.16	22.00	22.46
	8H	24.23	25.03	24.69	25.47	25.94	20.85	21.65	21.31	22.10	22.56
	12H	24.37	25.09	24.85	25.57	26.04	20.96	21.68	21.44	22.16	22.63
8H	4H	23.49	24.29	23.96	24.74	25.20	20.61	21.41	21.07	21.85	22.32
	6H	24.15	24.82	24.65	25.31	25.78	21.12	21.78	21.62	22.27	22.75
	8H	24.39	24.98	24.90	25.49	25.98	21.33	21.92	21.84	22.43	22.92
	12H	24.59	25.11	25.10	25.61	26.17	21.50	22.02	22.01	22.51	23.08
12H	4H	23.48	24.20	23.96	24.68	25.15	20.65	21.37	21.13	21.85	22.32
	6H	24.14	24.74	24.65	25.25	25.73	21.18	21.78	21.69	22.29	22.77
	8H	24.41	24.94	24.92	25.43	25.99	21.44	21.96	21.95	22.46	23.02