

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: P242527

Luminaire Tested: S123RDRP-S775D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242527
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-S775D927-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

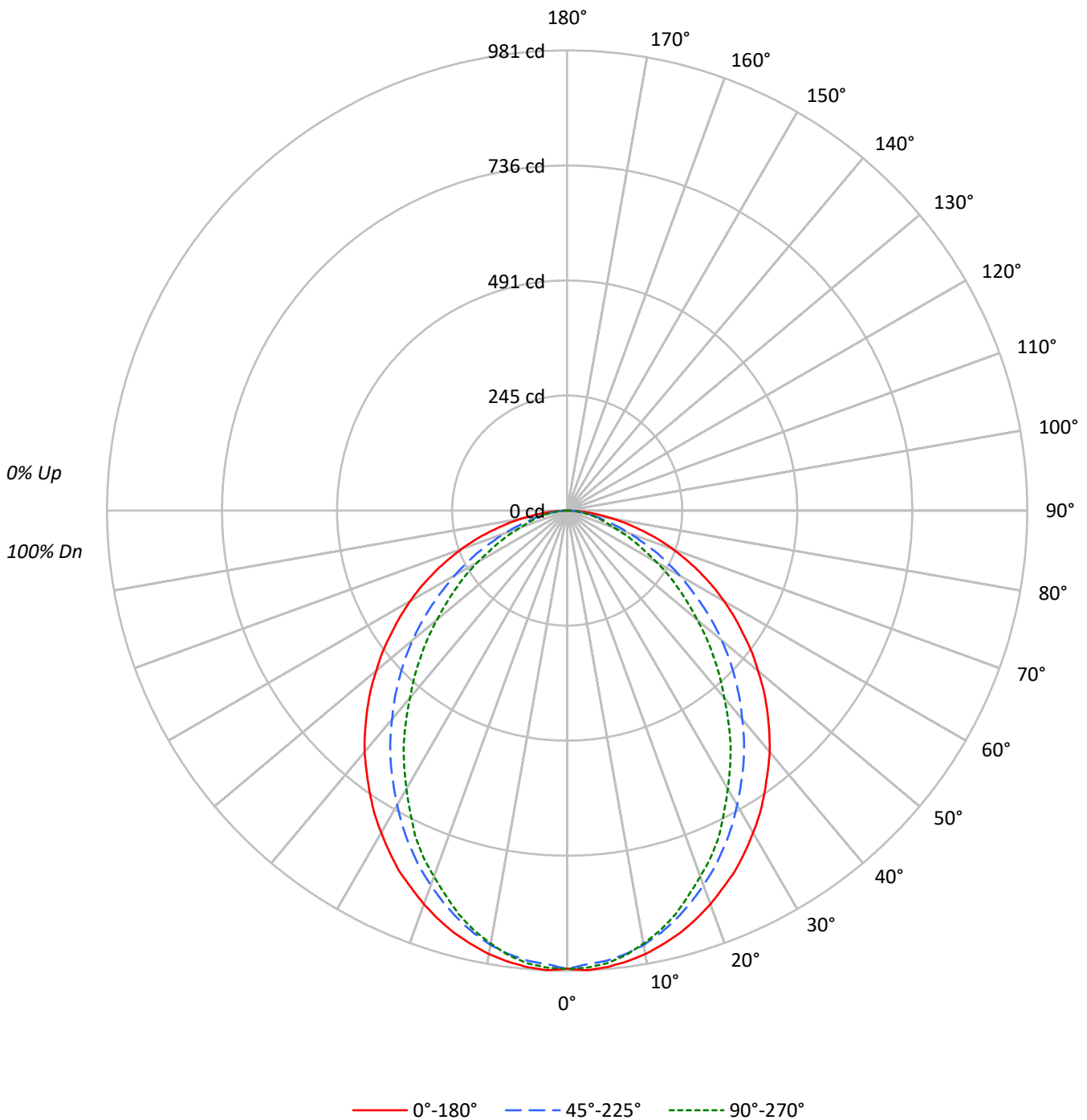
Lumens per Lamp: N/A
Luminaire Lumens: 2206.7 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	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°	11840	11840	11840
5°	11885	11721	11788
10°	11817	11573	11535
15°	11690	11303	11184
20°	11516	10964	10709
25°	11336	10584	10245
30°	11099	10145	9590
35°	10855	9706	8991
40°	10630	9188	8249
45°	10335	8677	7577
50°	10009	8097	6826
55°	9677	7432	6126
60°	9372	6722	5358
65°	8974	5954	4589
70°	8477	4997	3707
75°	7756	3934	3489
80°	6911	3483	3204
85°	5841	3087	2865

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10335 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.8	4.2
10°-20°	255.4	11.6
20°-30°	367.8	16.7
30°-40°	414.2	18.8
40°-50°	396.2	18.0
50°-60°	324.3	14.7
60°-70°	218.6	9.9
70°-80°	109.7	5.0
80°-90°	28.7	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°	715.0	32.4
0°-40°	1129.2	51.2
0°-60°	1849.7	83.8
0°-90°	2206.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2206.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	977	977	977	977	977	
5°	977	973	963	970	969	93
15°	932	923	901	897	891	263
25°	848	828	791	775	766	390
35°	734	705	656	622	608	459
45°	603	567	506	461	442	465
55°	458	419	352	306	290	411
65°	313	269	208	169	160	310
75°	166	128	84	76	74	176
85°	42	25	22	21	21	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	976.8	976.8	976.8	976.8	976.8
2.5°	980.7	977.6	968.0	976.8	975.2
5°	976.8	972.8	963.3	970.4	968.8
7.5°	969.6	965.7	953.8	958.5	956.2
10°	960.1	954.6	940.3	941.1	937.2
12.5°	946.7	940.3	922.1	921.3	916.6
15°	931.6	922.9	900.7	896.8	891.2
17.5°	913.4	903.9	876.2	868.2	860.3
20°	892.8	880.1	850.0	839.7	830.2
22.5°	869.8	854.8	822.3	808.8	800.1
25°	847.6	827.8	791.4	774.8	766.0
27.5°	820.7	799.3	759.7	737.5	724.1
30°	793.0	769.2	724.8	697.9	685.2
32.5°	765.2	737.5	690.0	659.9	646.4
35°	733.6	705.0	655.9	621.9	607.6
37.5°	701.9	671.0	619.5	581.5	564.0
40°	671.8	636.9	580.7	539.5	521.3
42.5°	637.7	602.9	544.2	498.3	482.4
45°	602.9	567.2	506.2	461.1	442.0
47.5°	568.8	529.2	469.0	419.9	403.2
50°	530.8	493.5	429.4	380.2	362.0
52.5°	496.7	455.5	392.1	340.6	324.8
55°	457.9	419.1	351.7	305.8	289.9
57.5°	423.0	381.0	312.9	269.3	255.9
60°	386.6	343.0	277.3	234.5	221.0
62.5°	350.1	306.6	240.8	201.2	187.0
65°	312.9	269.3	207.6	168.7	160.0
67.5°	275.7	231.3	171.1	141.8	132.3
70°	239.2	196.5	141.0	113.3	104.6
72.5°	202.8	160.8	111.7	90.3	87.9
75°	165.6	127.5	84.0	76.0	74.5
77.5°	131.5	96.6	65.8	61.0	59.4
80°	99.0	66.5	49.9	47.5	45.9
82.5°	68.1	41.2	35.6	33.3	33.3
85°	42.0	24.6	22.2	20.6	20.6
87.5°	19.0	10.3	10.3	9.5	8.7
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	20.03	21.59	20.40	21.90	22.22	17.41	18.96	17.77	19.27	19.59
	3H	21.81	23.21	22.19	23.54	23.90	18.52	19.91	18.89	20.24	20.60
	4H	22.47	23.78	22.87	24.13	24.51	18.91	20.22	19.31	20.57	20.95
	6H	22.95	24.17	23.36	24.53	24.92	19.23	20.44	19.64	20.81	21.20
	8H	23.10	24.26	23.53	24.65	25.05	19.34	20.50	19.77	20.89	21.29
	12H	23.21	24.31	23.64	24.69	25.12	19.42	20.52	19.85	20.90	21.33
4H	2H	20.29	21.61	20.69	21.95	22.33	18.12	19.43	18.52	19.78	20.16
	3H	22.26	23.35	22.67	23.75	24.15	19.40	20.49	19.81	20.89	21.29
	4H	23.03	24.01	23.46	24.42	24.86	19.88	20.86	20.31	21.27	21.71
	6H	23.62	24.48	24.08	24.92	25.38	20.29	21.15	20.75	21.59	22.05
	8H	23.81	24.61	24.28	25.06	25.52	20.44	21.24	20.90	21.68	22.15
	12H	23.96	24.68	24.44	25.15	25.63	20.55	21.27	21.03	21.74	22.21
8H	4H	23.08	23.88	23.55	24.33	24.79	20.20	21.00	20.66	21.44	21.91
	6H	23.74	24.40	24.24	24.90	25.37	20.71	21.37	21.21	21.86	22.34
	8H	23.98	24.57	24.49	25.08	25.57	20.91	21.51	21.43	22.02	22.50
	12H	24.18	24.70	24.69	25.19	25.76	21.09	21.61	21.59	22.10	22.67
12H	4H	23.07	23.79	23.55	24.27	24.74	20.24	20.96	20.72	21.43	21.90
	6H	23.73	24.33	24.24	24.83	25.32	20.77	21.37	21.28	21.87	22.36
	8H	24.00	24.53	24.51	25.02	25.58	21.03	21.55	21.54	22.04	22.61