

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: P242541

Luminaire Tested: S123RDRP-S775D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242541
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-S775D840-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

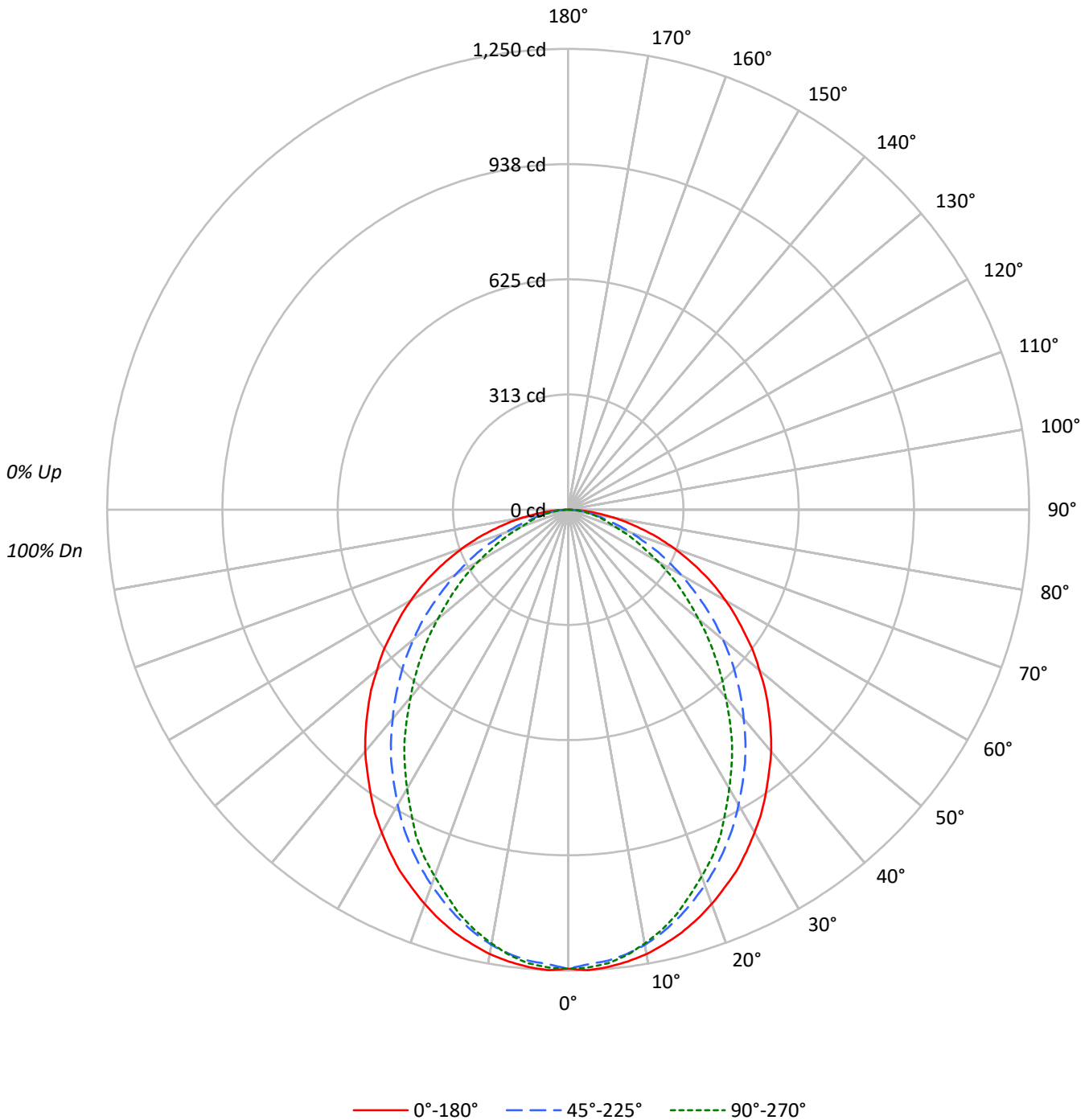
Lumens per Lamp: N/A
Luminaire Lumens: 2813.0 lumens
Efficiency: N/A
Efficacy: 106.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

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					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°	15093	15093	15093
5°	15151	14942	15028
10°	15065	14754	14705
15°	14903	14409	14257
20°	14681	13978	13651
25°	14452	13493	13060
30°	14149	12933	12226
35°	13837	12373	11462
40°	13551	11712	10514
45°	13174	11062	9660
50°	12759	10321	8703
55°	12335	9476	7811
60°	11947	8570	6832
65°	11441	7589	5851
70°	10809	6372	4724
75°	9886	5011	4444
80°	8809	4439	4090
85°	7441	3936	3658

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13174 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.1	4.2
10°-20°	325.6	11.6
20°-30°	468.8	16.7
30°-40°	528.0	18.8
40°-50°	505.0	18.0
50°-60°	413.4	14.7
60°-70°	278.7	9.9
70°-80°	139.8	5.0
80°-90°	36.5	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°	911.5	32.4
0°-40°	1439.5	51.2
0°-60°	2358.0	83.8
0°-90°	2813.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2813.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1245	1245	1245	1245	1245	
5°	1245	1240	1228	1237	1235	118
15°	1188	1176	1148	1143	1136	335
25°	1081	1055	1009	988	976	497
35°	935	899	836	793	775	585
45°	768	723	645	588	564	593
55°	584	534	448	390	370	523
65°	399	343	265	215	204	395
75°	211	163	107	97	95	225
85°	54	31	28	26	26	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1245.2	1245.2	1245.2	1245.2	1245.2
2.5°	1250.2	1246.2	1234.1	1245.2	1243.1
5°	1245.2	1240.1	1228.0	1237.1	1235.1
7.5°	1236.1	1231.0	1215.9	1221.9	1218.9
10°	1224.0	1216.9	1198.7	1199.7	1194.7
12.5°	1206.8	1198.7	1175.5	1174.5	1168.4
15°	1187.6	1176.5	1148.2	1143.2	1136.1
17.5°	1164.4	1152.3	1116.9	1106.8	1096.7
20°	1138.1	1122.0	1083.6	1070.5	1058.3
22.5°	1108.8	1089.6	1048.2	1031.1	1020.0
25°	1080.6	1055.3	1008.9	987.6	976.5
27.5°	1046.2	1019.0	968.5	940.2	923.0
30°	1010.9	980.6	924.0	889.7	873.5
32.5°	975.5	940.2	879.6	841.2	824.1
35°	935.1	898.8	836.2	792.7	774.6
37.5°	894.7	855.4	789.7	741.2	719.0
40°	856.4	811.9	740.2	687.7	664.5
42.5°	812.9	768.5	693.8	635.2	615.0
45°	768.5	723.1	645.3	587.7	563.5
47.5°	725.1	674.6	597.8	535.2	514.0
50°	676.6	629.1	547.3	484.7	461.5
52.5°	633.2	580.7	499.9	434.2	414.0
55°	583.7	534.2	448.4	389.8	369.6
57.5°	539.3	485.7	398.9	343.4	326.2
60°	492.8	437.3	353.5	298.9	281.8
62.5°	446.4	390.8	307.0	256.5	238.3
65°	398.9	343.4	264.6	215.1	204.0
67.5°	351.4	294.9	218.1	180.8	168.6
70°	305.0	250.4	179.8	144.4	133.3
72.5°	258.5	205.0	142.4	115.1	112.1
75°	211.1	162.6	107.0	96.9	94.9
77.5°	167.6	123.2	83.8	77.8	75.7
80°	126.2	84.8	63.6	60.6	58.6
82.5°	86.8	52.5	45.4	42.4	42.4
85°	53.5	31.3	28.3	26.3	26.3
87.5°	24.2	13.1	13.1	12.1	11.1
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	20.88	22.43	21.24	22.75	23.06	18.25	19.81	18.62	20.12	20.43
	3H	22.66	24.05	23.03	24.38	24.74	19.36	20.76	19.74	21.09	21.45
	4H	23.32	24.63	23.71	24.98	25.35	19.76	21.07	20.15	21.42	21.79
	6H	23.80	25.01	24.21	25.38	25.77	20.07	21.29	20.49	21.65	22.05
	8H	23.95	25.10	24.37	25.49	25.89	20.18	21.34	20.61	21.73	22.13
	12H	24.05	25.16	24.48	25.54	25.97	20.26	21.37	20.69	21.75	22.18
4H	2H	21.14	22.45	21.54	22.80	23.18	18.96	20.28	19.36	20.62	21.00
	3H	23.10	24.19	23.51	24.59	24.99	20.24	21.33	20.65	21.73	22.13
	4H	23.87	24.85	24.30	25.27	25.71	20.72	21.70	21.15	22.12	22.56
	6H	24.47	25.32	24.92	25.76	26.22	21.14	21.99	21.59	22.44	22.89
	8H	24.66	25.46	25.12	25.90	26.37	21.28	22.08	21.75	22.53	22.99
	12H	24.80	25.52	25.29	26.00	26.47	21.39	22.11	21.88	22.59	23.06
8H	4H	23.93	24.73	24.39	25.17	25.64	21.04	21.84	21.50	22.28	22.75
	6H	24.59	25.25	25.08	25.74	26.22	21.55	22.22	22.05	22.71	23.18
	8H	24.82	25.41	25.33	25.92	26.41	21.76	22.35	22.27	22.86	23.35
	12H	25.02	25.55	25.53	26.04	26.60	21.93	22.45	22.44	22.95	23.51
12H	4H	23.92	24.63	24.40	25.11	25.58	21.08	21.80	21.57	22.28	22.75
	6H	24.57	25.17	25.09	25.68	26.17	21.61	22.21	22.13	22.72	23.21
	8H	24.84	25.37	25.35	25.86	26.42	21.87	22.40	22.38	22.89	23.45