

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P242207

Luminaire Tested: **S121RDR-S685D935-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242207  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-23)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121RDR-S685D935-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1925.6 lumens  
Efficiency: N/A  
Efficacy: 72.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 0.92 / 1.09  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct

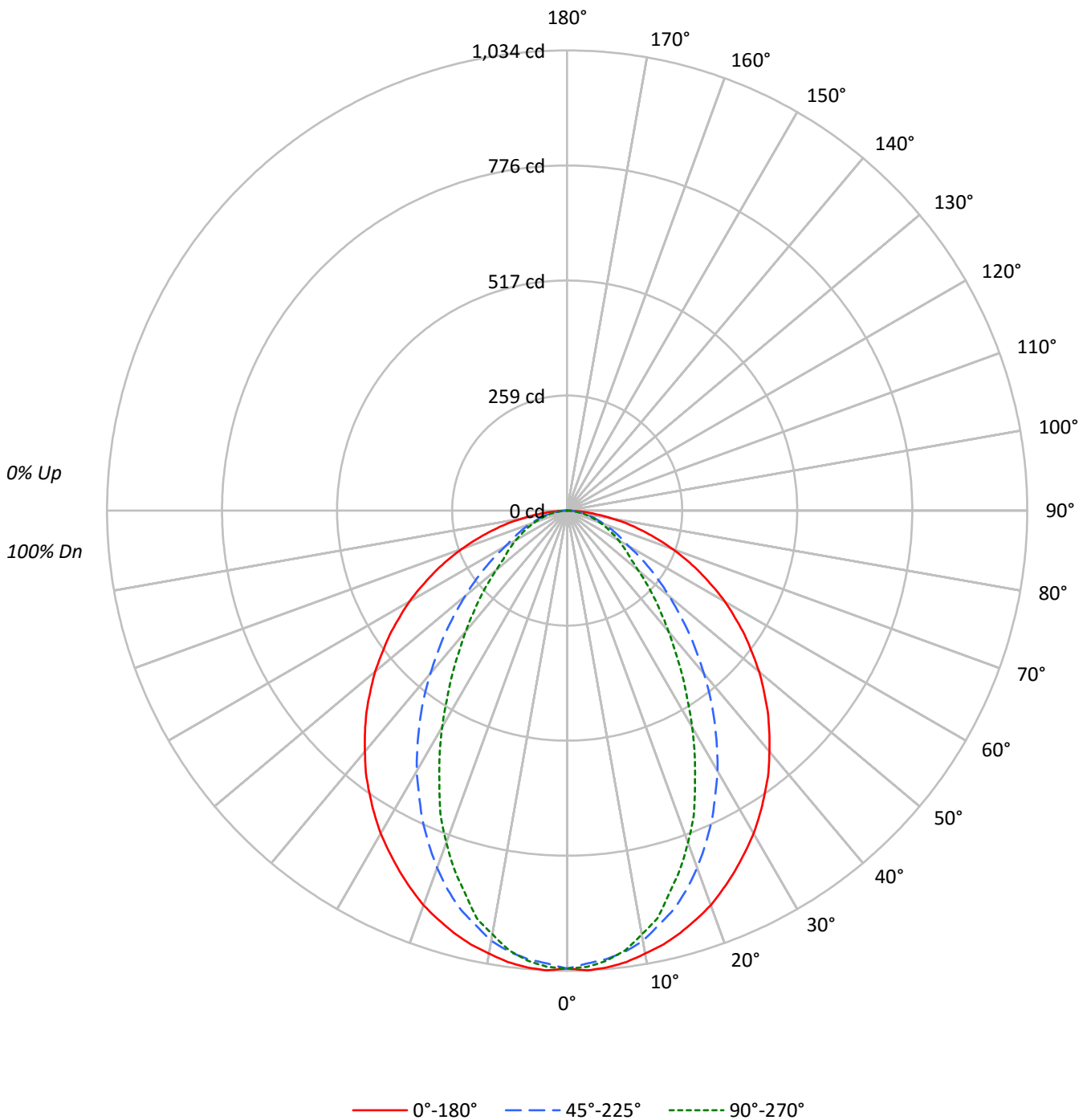
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77					75				
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67					65				
4	86	76	68	62	84	74	67	61	72	65	60	70	64	60	68	63	59					57				
5	80	68	60	54	78	67	60	54	65	59	53	63	57	53	62	56	52					50				
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42					40				
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38					37				
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35					33				
10	58	45	38	33	56	45	37	33	44	37	33	43	37	32	42	36	32					31				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	30486	30486	30486
5°	30653	30091	30192
10°	30412	29530	29091
15°	30135	28445	27258
20°	29756	26931	25030
25°	29191	25137	22208
30°	28664	23125	19235
35°	28029	20867	16288
40°	27342	18485	13719
45°	26696	16128	11582
50°	25956	13810	9565
55°	25132	11654	8539
60°	24285	9440	7911
65°	23122	8511	7305
70°	21779	7684	6714
75°	20011	6995	6205
80°	17490	6177	5580
85°	14346	5269	4691



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.3	5.0
10°-20°	262.0	13.6
20°-30°	357.6	18.6
30°-40°	371.7	19.3
40°-50°	324.7	16.9
50°-60°	245.5	12.7
60°-70°	162.1	8.4
70°-80°	83.6	4.3
80°-90°	22.2	1.2
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°	715.9	37.2
0°-40°	1087.5	56.5
0°-60°	1657.7	86.1
0°-90°	1925.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1925.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1029	1029	1029	1029	1029	
5°	1031	1025	1012	1019	1015	98
15°	982	968	927	903	889	277
25°	893	858	769	705	679	411
35°	775	706	577	482	450	485
45°	637	542	385	299	276	491
55°	486	369	226	171	165	435
65°	330	206	121	107	104	327
75°	175	81	61	56	54	186
85°	42	17	16	15	14	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1028.9	1028.9	1028.9	1028.9	1028.9
2.5°	1034.1	1028.9	1018.6	1028.0	1026.3
5°	1030.6	1024.6	1011.7	1019.4	1015.1
7.5°	1022.9	1016.0	999.6	1002.2	997.0
10°	1010.8	1003.1	981.5	977.2	966.9
12.5°	998.8	986.7	953.1	944.5	938.5
15°	982.4	967.8	927.3	903.2	888.6
17.5°	963.5	943.7	892.9	860.1	844.6
20°	943.7	917.8	854.1	809.3	793.8
22.5°	918.7	888.6	811.9	758.5	743.0
25°	892.9	857.6	768.9	705.2	679.3
27.5°	865.3	822.3	720.7	649.2	620.8
30°	837.8	785.2	675.9	589.8	562.2
32.5°	806.8	748.2	625.9	535.5	502.8
35°	774.9	706.0	576.9	482.2	450.3
37.5°	743.0	667.3	527.8	432.2	398.6
40°	706.9	626.8	477.9	379.7	354.7
42.5°	672.4	584.6	430.5	339.2	312.5
45°	637.1	541.6	384.9	298.8	276.4
47.5°	599.3	499.4	340.1	263.5	241.1
50°	563.1	454.6	299.6	229.0	207.5
52.5°	523.5	412.4	261.7	193.7	181.7
55°	486.5	369.4	225.6	171.3	165.3
57.5°	446.9	328.0	192.0	155.0	148.1
60°	409.8	286.7	159.3	137.8	133.5
62.5°	368.5	247.1	138.6	122.3	118.0
65°	329.8	205.8	121.4	106.8	104.2
67.5°	291.0	170.5	105.0	93.0	90.4
70°	251.4	135.2	88.7	80.1	77.5
72.5°	212.7	103.3	74.0	67.2	65.4
75°	174.8	80.9	61.1	56.0	54.2
77.5°	141.2	62.0	48.2	43.9	43.0
80°	102.5	45.6	36.2	33.6	32.7
82.5°	69.7	31.0	25.8	24.1	22.4
85°	42.2	17.2	15.5	14.6	13.8
87.5°	17.2	7.7	6.9	6.0	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)