

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931242

Luminaire Tested: DFN2DS-TR2F0-020DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931242
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR2F0-020DS940-RLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

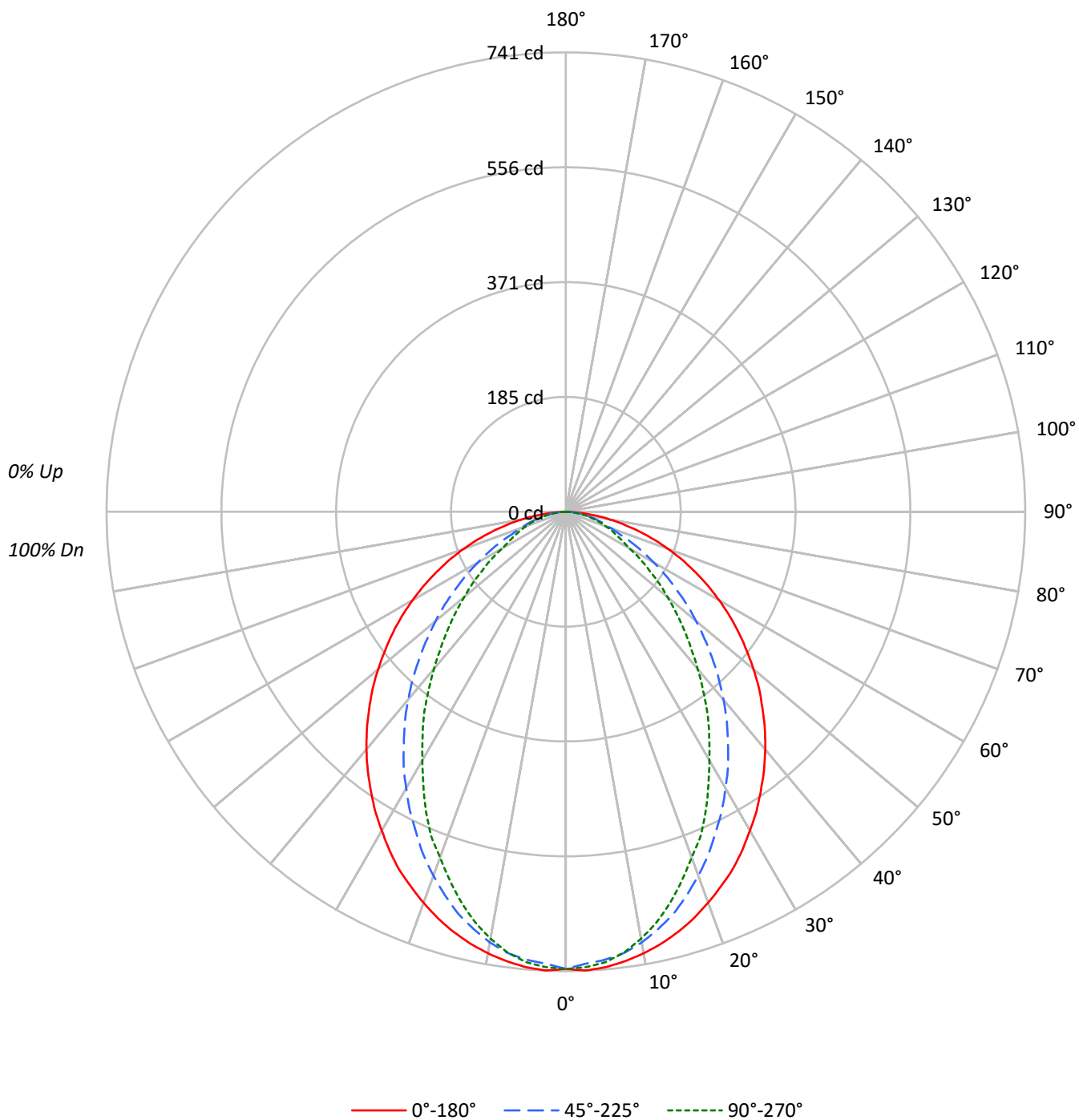
Lumens per Lamp: N/A
Luminaire Lumens: 1516.4 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1644	1644	1644
5°	1651	1624	1633
10°	1638	1597	1584
15°	1619	1550	1506
20°	1593	1483	1408
25°	1567	1405	1314
30°	1530	1327	1192
35°	1493	1241	1086
40°	1457	1152	963
45°	1414	1053	852
50°	1371	952	744
55°	1326	843	638
60°	1274	729	530
65°	1215	613	482
70°	1144	504	444
75°	1057	459	415
80°	934	411	376
85°	732	325	325

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1414 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.1	4.6
10°-20°	189.7	12.5
20°-30°	266.3	17.6
30°-40°	290.3	19.1
40°-50°	266.8	17.6
50°-60°	209.6	13.8
60°-70°	136.4	9.0
70°-80°	70.2	4.6
80°-90°	17.9	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°	525.1	34.6
0°-40°	815.5	53.8
0°-60°	1291.9	85.2
0°-90°	1516.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1516.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	737	737	737	737	737	
5°	737	734	725	731	729	70
15°	701	694	671	659	652	198
25°	637	615	571	544	534	293
35°	548	514	456	414	399	343
45°	448	404	334	286	270	346
55°	341	289	217	177	164	305
65°	230	176	116	94	91	228
75°	123	76	53	49	48	130
85°	29	15	13	13	13	34
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	737.3	737.3	737.3	737.3	737.3
2.5°	740.6	737.3	729.9	736.7	735.4
5°	737.3	734.0	725.3	731.4	729.3
7.5°	731.4	727.3	718.0	720.6	717.3
10°	723.3	718.6	705.3	703.3	699.3
12.5°	713.3	707.3	689.2	685.3	677.9
15°	701.3	693.9	671.2	658.6	652.0
17.5°	687.3	676.6	648.6	633.9	623.2
20°	671.2	657.8	624.6	607.9	593.2
22.5°	653.9	638.6	599.9	577.2	567.2
25°	636.6	615.2	571.1	543.9	533.8
27.5°	615.9	593.2	544.5	513.1	497.7
30°	593.9	568.5	515.1	481.1	463.0
32.5°	572.5	541.8	487.1	447.1	430.4
35°	548.5	514.5	455.8	413.7	399.0
37.5°	525.1	488.4	426.4	380.3	363.7
40°	500.4	460.5	395.7	348.3	330.9
42.5°	475.1	432.4	365.0	315.6	299.0
45°	448.4	403.6	333.7	286.2	270.2
47.5°	423.1	375.7	303.6	256.2	241.6
50°	395.1	347.7	274.3	228.2	214.3
52.5°	367.6	317.6	246.2	202.2	189.6
55°	340.9	288.9	216.8	176.9	164.1
57.5°	313.6	260.2	190.9	153.5	142.8
60°	285.6	232.2	163.5	129.5	118.8
62.5°	258.2	204.9	140.1	108.1	102.8
65°	230.2	176.2	116.1	93.5	91.4
67.5°	203.6	149.4	93.5	82.1	80.1
70°	175.5	123.5	77.3	70.7	68.1
72.5°	148.8	99.4	64.7	59.4	58.1
75°	122.7	76.0	53.3	48.7	48.1
77.5°	96.8	54.1	42.0	39.3	38.0
80°	72.7	38.7	32.0	29.3	29.3
82.5°	50.7	26.0	22.0	20.7	20.7
85°	28.6	14.6	12.7	12.7	12.7
87.5°	10.7	5.4	5.4	4.6	4.6
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	12.96	14.48	13.33	14.80	15.11	8.92	10.45	9.29	10.76	11.07
	3H	14.73	16.09	15.11	16.42	16.78	10.19	11.56	10.57	11.88	12.25
	4H	15.39	16.67	15.79	17.02	17.40	10.69	11.97	11.09	12.32	12.70
	6H	15.88	17.07	16.30	17.43	17.82	11.07	12.25	11.48	12.62	13.01
	8H	16.05	17.18	16.48	17.56	17.97	11.20	12.32	11.62	12.71	13.11
	12H	16.15	17.23	16.58	17.61	18.04	11.28	12.36	11.71	12.74	13.17
4H	2H	13.07	14.35	13.47	14.70	15.07	9.62	10.90	10.02	11.25	11.63
	3H	15.00	16.06	15.41	16.46	16.86	11.06	12.13	11.47	12.53	12.93
	4H	15.75	16.71	16.18	17.12	17.56	11.66	12.62	12.10	13.03	13.47
	6H	16.34	17.17	16.80	17.62	18.08	12.15	12.98	12.61	13.42	13.88
	8H	16.56	17.33	17.02	17.78	18.24	12.31	13.09	12.77	13.53	14.00
	12H	16.71	17.40	17.19	17.88	18.35	12.43	13.12	12.91	13.60	14.07
8H	4H	15.77	16.55	16.24	16.99	17.46	12.02	12.79	12.48	13.24	13.70
	6H	16.41	17.05	16.91	17.54	18.02	12.60	13.24	13.10	13.73	14.21
	8H	16.66	17.24	17.18	17.75	18.24	12.82	13.40	13.34	13.91	14.40
	12H	16.86	17.37	17.37	17.87	18.43	13.00	13.51	13.51	14.00	14.57
12H	4H	15.76	16.45	16.24	16.93	17.40	12.06	12.75	12.54	13.23	13.70
	6H	16.39	16.97	16.91	17.48	17.97	12.66	13.24	13.18	13.75	14.24
	8H	16.68	17.19	17.19	17.68	18.24	12.94	13.45	13.45	13.94	14.50